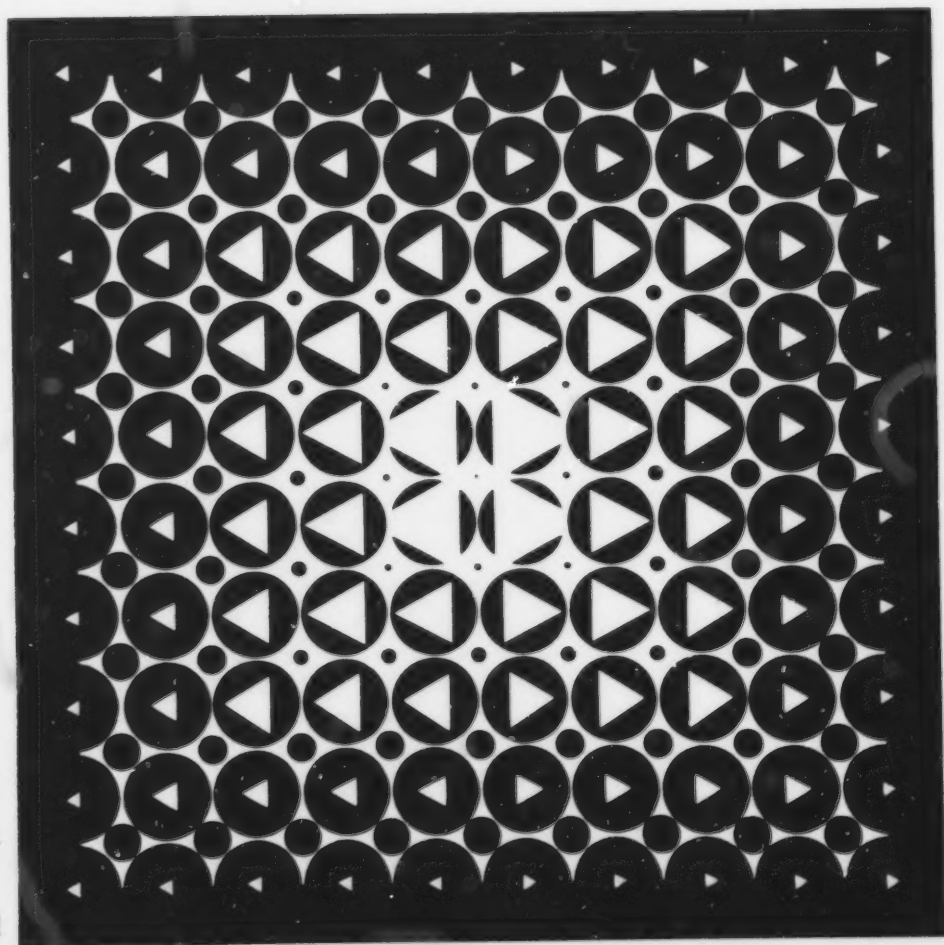


MARION STEELE

**Canadian Housing
Allowances: An
Economic Analysis**

ONTARIO ECONOMIC COUNCIL RESEARCH STUDIES



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**CANADIAN HOUSING ALLOWANCES:
AN ECONOMIC ANALYSIS**



Marion Steele

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Preface

A distinguishing characteristic of this study is its extensive analysis of the experience of existing provincial housing allowance programs. I believe that this analysis has led to insights and conclusions that make this study more relevant to policy discussion than simulation studies which ignore existing programs. But there is a cost to the approach taken here: gathering and investigating the data are time-consuming and frequently frustrating. I am very much indebted to a number of people who helped keep this cost within reasonable bounds. Jim Zamprelli of the Manitoba Housing and Renewal Corporation (MHRC) sent me copious amounts of data, greatly assisted me in the interpretation of the data, and shared with me his insights into the operation of the programs. Morley Minuk, who, with Kathy Davidson, wrote valuable reports of MHRC surveys of allowance recipients, gave me crucially important information; so did Heidi Everett and Gisela Gielow, from the front lines of MHRC operations. I am also very much indebted to Claudia Barnett of the New Brunswick Housing Corporation and to Lenke Turji of the British Columbia Ministry of Human Resources for their helpfulness in providing me with data and explanations. And as various footnotes in the text attest, I have been aided by other officials as well. I am grateful to all these people – and to others I have missed; without their help this study would not have been possible. Although they may not agree with my interpretation of the data, I hope that they will find that I have not misused it. In any case, they are not responsible for any error of fact or interpretation in this study.

This study and, in particular, the time-consuming investigation of data from existing housing allowance programs would not have been possible without the financial assistance of the Ontario Economic

Council. Enid Slack of the Council nicely balanced the carrot and stick aspects of her role and was more helpful than any author has a right to expect both in her comments and in her choice of the two anonymous referees: the uncommon scholarship of one of these and the uncommon elegance of the other delayed but greatly improved the final product of this study.

I am indebted to many others. Derek Hum was of great assistance at the start, generously answering many questions and making many suggestions. Bruce Ratford and Peter Lepik shared their extensive knowledge of housing programs with me. George Fallis did his best to keep me on the straight and narrow. Pat Laverty's insight and special knowledge were reflected in very useful comments on the manuscript. Two colleagues at the University of Guelph, Clive Southey and Robert Swidinsky, helped clarify some of the analysis. Two old friends, Trevor Lloyd, a landlord and scholar, and Peter Tomlinson, an economist-planner and scholar, read the manuscript and made extensive useful comments. My debt to Peter Tomlinson is especially great; while generally sympathetic to my point of view he was ever alert to the counter-arguments and was ever ready to put them to me in the course of many discussions over the course of this study.

I am greatly indebted for research assistance to the indispensable Jenny Arnott; to Mary McDonough who was very helpful at the start of the project; and to Catherine Yerex. I am indebted to Jill Leslie for emergency programming and other help. Finally I am indebted to my husband, David Mosey, who read and commented on the manuscript and helped in other ways. I alone am responsible for any errors of fact or interpretation.

Inevitably there is a considerable lag between the completion of a manuscript and its publication. In the case of this study the lag has been rather longer than usual. It is thus important to note that undated information in this study was current as of the summer of 1983. The evidence on provincial programs is largely for periods somewhat earlier than this. Data for 1984, analysed long after the completion of this study, further support the conclusions of this study.

**CANADIAN HOUSING ALLOWANCES:
AN ECONOMIC ANALYSIS**



1

Introduction

1 BACKGROUND

During the last decade there has been a substantial withdrawal of governments from the provision of construction-based housing subsidies for low-income households. There has also been an abandonment of earlier hopes for a comprehensive income maintenance system. From the search for alternative housing policies and for alternative income maintenance schemes has emerged the idea of a housing allowance – a cash payment to households that depends both on income and on some aspect of housing. Housing allowances now exist in British Columbia, New Brunswick, Manitoba, and Quebec, and all follow the basic pattern established by British Columbia in 1977. The BC allowance pays 75 per cent of the difference between the recipient's rent and 30 per cent of his or her income, except that where this rent is above a set threshold, threshold rent replaces actual rent in the allowance formula. Housing allowances of this general nature – income-conditioned, percentage-of-rent payments capped by a threshold rent – are called ICPOR allowances in this study. Their effects, design, and roles as housing and income security programs are the subjects of this monograph.

What are appropriate goals for a housing allowance? The nature of the housing allowance formula suggests that goals must be of two kinds. First, because the amount of the allowance depends on the recipient's housing expenditure the allowance should be associated with housing goals. Second, because the housing allowance depends on income – and indeed for those paying more than threshold rent is merely a negative income tax – a housing allowance should also be associated with income security goals. The housing goals of a housing

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allowance will be considered first, followed by examination of income security goals, and a guide to this study.

II HOUSING MARKETS AND HOUSING GOALS

Housing markets

To understand the housing goals of a housing allowance it is helpful to examine some fundamentals of housing markets and housing policy. One approach to this is to consider the social planner's slogan, 'the right to housing.' This slogan is a puzzle for economists. It is clear that it makes more sense to speak of 'the right' to housing than the right to, say, automobiles; shelter is a necessity of life, but private vehicular transportation is not. But why the right to housing rather than the right to all of food, shelter, and clothing or, better still, the right to the cash that will permit these necessities to be purchased? Traditional economic theory points out that the most efficient way to help those people who cannot provide the necessities for themselves is to give them cash. The recipients, knowing better than anyone else what they want, are best able to choose how to spend the cash.

One explanation for the puzzle is that the nature of housing service and the nature of its market differ in critically important ways from those for food and clothing. Consider the matter of availability. It is possible at virtually any time of the day on any day of the week to buy a litre of milk at a price that varies little from the mean market price. But it is often not possible on any given day to purchase the service of, say, a modest-quality two-bedroom apartment at a rent very close to the mean market rent, especially if that apartment must be in a given neighbourhood or small town and especially if the purchaser of the housing service is a single-parent mother with two young children.

The reasons for the market failure in the case of housing service are many. First, housing services cannot easily be moved to excess demand markets from excess supply markets as inventories of milk can be. The elimination of excess demand requires new construction and land development, and this takes many months. The rent of any particular apartment may vary from the mean market rent partly because for housing service the ratio of new 'sales' to inventory is very low and partly because it is very costly for a sitting tenant to move in order to take advantage of bargains offered by another supplier. A bargain might be offered by a small landlord, for such landlords often lack financial strength and have limited access to capital markets;

they may assess the consequence of a vacancy as so calamitous that they insure against it by setting a rent well below the rent charged by larger landlords. Further, the availability of housing service may be much less for some classes of tenants than for others because it is costlier to deliver housing service to them. A single-parent tenant may generate more maintenance costs because her children may do more damage to an apartment or because her family's presence in a building increases turnover in that building. Low-income households, especially those with fluctuating income, may also be relatively costly to deliver service to because they are less credit-worthy.¹ A profit-maximizing landlord unable to charge a rent varying according to the characteristics of tenants and with units able to attract 'good' tenants will attempt to exclude costly tenants. The supplier of milk has no such substantial incentive to discriminate among purchasers.

A second major difference between the housing service market and food and clothing markets is the greater importance of transactions costs in the former. A household wishing to consume more milk may do this very easily, merely increasing the amount it purchases at the next shopping trip. A household wishing to increase the amount of housing service it consumes from, say, that of a two-bedroom dwelling to a three-bedroom one will ordinarily have to incur substantial information, search, and physical moving costs² and give up a length-of-tenure discount in the rent of its original dwelling. Transactions costs will be exacerbated if the change requires a move to another neighbourhood, perhaps involving new schools. The extent of the size of perceived transactions costs is apparent in the common emotive headline that tenants of a building slated for demolition will 'lose their homes.'

Most housing policy can be regarded as a response to these two special characteristics of housing. The mission of the Central Mortgage and Housing Corporation (CMHC) has been largely to increase the supply of housing. Increasing the supply of owner-occupied housing, the main thrust of CMHC policy in the 1950s, helped ensure availability of housing service, especially for families, and helped protect households from the transactions costs associated with forced moves because owner-occupancy gives great security of tenure. Increasing the supply of public, non-profit, and co-operative housing, an important thrust of CMHC policy over the last two decades, helps achieve these same ends for low-income elderly and family households.

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Housing goals

A housing allowance, as housing policy, may be regarded as an alternative to public housing and other social housing programs as a way of helping low-income households avoid the psychic and monetary costs of a move. It is an instrument to increase security of tenure. If the household's rent jumps, because of the removal of rent controls or for other reasons, the impact is cushioned by the housing allowance's rent subsidy.³ The household may then be able to afford to stay in its home. If unemployment, sickness, childcare responsibilities, or retirement or death of a spouse cause a drop in income, a housing allowance will help protect the household from the consequences because its payment is geared to income as well as to the size of rent, a major fixed expense.

An alternative goal for a housing allowance is to increase the quantity of housing service consumed by low-income households. This goal (or, more precisely, reducing the proportion of households who live in inadequate and unsuitable dwellings) is a traditional one in housing policy, though, as the discussion in chapter 2 indicates, a largely outdated one. One rationale for increasing housing consumption is the positive externalities of good housing. A well-maintained dwelling increases the value of neighbouring properties, and better-housed people may cost less in social dislocation than badly housed people. A subsidy to housing thus may be necessary to achieve an optimal level of maintenance.

A housing goal of major importance in the late 1970s was increased income integration and perhaps racial and ethnic integration. It was one reason governments moved away from public housing, with its completely low-income clientele. If integration can reduce costs such as policing and social assistance, it can increase social efficiency. Increasing income integration is a possible goal for a housing allowance. It is discussed further in chapter 7.

At another level, a goal of housing allowances is to reduce the pressure for construction of more public housing by reducing waiting lists. Closely associated with this is a second goal, lessening the inequity between low-income households who are public housing tenants and those who are not. Much of the discussion in chapter 7 is concerned with these two goals. A third goal at the same level is to reduce the pressure for the continuation and tightening of rent control. It is likely that these three second-best goals have been critically important in inducing four provincial governments to

introduce housing allowance programs, even in the absence of contributions from the federal government toward their cost.

III INCOME SECURITY GOALS

A major goal for a housing allowance is to reduce poverty by equitably redistributing income. This is the goal of all income supplements. A housing allowance, as has been pointed out, is merely a simple negative income tax for low-income households paying more than the threshold rents. For households paying less it may also be viewed as a negative income tax, with the peculiarity that the support level (the amount of the allowance when the recipient's other income is zero) depends on its rent. Basing the support level on rent would not be equitable if a household's rent reflected only its housing preferences (constrained by its income and a single given price of housing service). To the extent that a household's rent reflects other factors, however, it is equitable to base the support level on rent.

One of the other factors is price variation. In general there is not a single price for housing service.⁴ The existence of rent control and other market imperfections implies that much of the difference among rents paid by low-income households is a consequence of variation in the price of housing service, not variation in the quantity of housing service. To the extent that this is true, an ICPOR allowance tends to help the neediest because its payment to those paying a high price for housing, other things being equal, is greater than its payment to those occupying bargain units.

It is quite easy to accept the proposition that price variation rooted in market imperfections should be acknowledged in the design of a negative income tax. But should the same apply to price variation rooted in household behaviour? Behaviour, especially past behaviour, underlies price variation associated with location. Consider some examples. Suppose an 85-year-old widow is paying a high rent because she lives in Toronto. She could have avoided this situation if she had moved to a rural area when her husband died, and she still can avoid it by moving. A 35-year-old father of three laid off from his job in Hamilton would pay a lower rent if he moved to Cornwall. If the price of housing service is high for single-parent families because landlords find them costly to serve, a single-parent mother could elect to get married or give her children up for adoption.

As these examples make clear, a behaviourally affected high price may be costly to reduce. For the 85-year-old Toronto widow the

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psychic, physical, and monetary costs of a move to a rural area might be impossibly high. She might prefer to starve.⁵ Subsidizing behaviourally affected high prices is justified by needs considerations just as is subsidizing high prices associated with market imperfection. To the extent that it is costly to move to avoid a high price, a low-income household paying a high price is likely to need more money than a household paying a low price to achieve the same level of utility. Of course, subsidizing behaviourally affected price variation also has negative efficiency implications. It reduces the incentive for households to choose a low price of housing service. An unsubsidized 85-year-old widow paying Toronto rents is, after all, a warning to 65-year-olds of the importance of planning ahead for the day when they might no longer be able to afford Toronto rents. There is clearly an equity-efficiency trade-off involved in subsidizing price variation. But such trade-offs are part of a standard negative income tax plan as well (Fallis, 1983), and in the ICPOR housing allowance the threshold rent puts a cap on needs considerations, as does the payment of only part of the incremental rent below threshold rent.

Just as the high cost of moving may constrain households to pay a high price for housing service, so the high cost of moving also may trap households in excess housing consumption. Typically, low-income households are worse off currently than they were previously, and so their equilibrium housing demand is lower than it was previously. But high transactions costs may prevent or slow adjustment, leaving their actual housing consumption relatively high. An 85-year-old woman may have stayed in her large apartment when her husband died and household income was reduced rather than have moved to a smaller one for the same reasons – high moving costs – that she did not move to a rural area to pay a lower price of housing service. Thus high moving costs are an equity rationale for subsidizing relatively high rent *even when* that rent is the outcome of a relatively large amount of housing service, not a relatively high price of housing service. Of course overhoused allowance recipients will in general receive some benefit from the excess housing, but they will also pay something for it because the ICPOR payment provides in general only a partial subsidy of incremental rent and provides no subsidy at all for rent above threshold rent.

Another constraint on the choice of low-income households is the existence of building codes and of housing-standard and zoning by-

laws. These regulations exist largely to prevent negative externalities. They reduce the probability of having a shoddily built and badly maintained building next door. All households gain a benefit from this reduction in negative externalities, but some households also lose because the regulations make it virtually impossible to live in structurally poor housing. The evidence that such bundles are relatively likely to be the optimum choices of low-income households (see the evidence for rural areas in chapter 2) indicates that the loss resulting from the constraint on choice is disproportionately borne by low-income households. They may be forced to spend more of their income on housing than they would in an unrestricted market because they are forced to purchase housing characteristics they do not want in order to purchase characteristics they do want. Five rooms in a building satisfying local requirements cost more to rent than five rooms in a shack. The severity of regulations and the degree of their enforcement vary from one jurisdiction to another. In general, regulations and enforcement are relatively strict in cities, and thus one reason why households pay a higher rent in cities than in rural areas is probably the greater forced consumption of structure quality in cities. Further, it is likely that the more space a low-income household uses, the greater its expenditure on unwanted structure quality and the greater its rent. Altogether, it is plausible that relatively high-rent, low-income households suffer more from the constraints imposed by regulations than do relatively low-rent, low-income households.

There is a rationale at a quite different level for the ICPOR allowance. Taxpayers may regard low-income households who spend a large proportion of their income on housing as especially deserving. Donor preferences may be so strong that taxpayers would not support a standard negative income tax scheme but would support one that has as an eligibility condition the expenditure of at least 30 per cent of income on rent. Note that this donor preference is quite distinct from one that would require the allowance to be used for additional housing expenditure. The latter is like the preference that reveals itself in an affirmative response to a beggar asking for the money to buy his bus ticket home; the former is like the preference that reveals itself in an affirmative response to a beggar who displays the ticket home, claims its purchase has left him destitute, and asks for money for other things.

IV A GUIDE TO THIS STUDY

The ultimate aim of this study is to determine whether or not an ICPOR housing allowance is desirable, especially for Ontario. For this purpose this study analyses the positive economics of an ICPOR allowance, in particular its effects on the market behaviour of households and landlords, on the distribution of income, and on the workings of other housing programs. This study also discusses such normative issues as the question of what a housing problem is, the desirable changes in other programs if an ICPOR is introduced, and the form an ICPOR should take. Because much of the discussion is quite detailed, summaries are included at the end of most chapters.

Chapter 2 sets the background by assessing the extent to which existing social housing programs in Ontario have been a success in the sense that they have eliminated the housing problems of low-income households. Indicators of housing problems are specified and used to assess the housing conditions of unsubsidized households. The two categories of households first examined, elderly renters and family renters, are the major targets for social housing programs. Next to be examined are various categories of 'ineligibles,' including renters paying a relatively low percentage of their income for rent. This examination shows that low-income families are clearly in greater need than the low-income elderly. In addition, it shows that while there are housing problems other than the hybrid housing-and-income problem of affordability, it is overwhelmingly the most common. This is important because the affordability problem is precisely the one at which an ICPOR housing allowance is aimed.

Chapter 3 considers the design of an ICPOR housing allowance and the theory of its effects on household behaviour. The ICPOR formula is analysed at some length and compared with the design-centre housing gap plan and the percentage-of-rent plan in the US Experimental Housing Allowance Program (EHAP). The incentives implied by an ICPOR are examined. It is argued that not only would an ICPOR with a contribution rate varying by household size be more equitable than one with a constant contribution rate, but also it would help discourage household splitting among eligibles. This chapter also examines the incentive for owner-occupiers to become renters if an allowance confined to renters is implemented. Appendix E considers the appropriate definition of income and housing expense for owner-occupiers if they are included in an allowance program. Elsewhere in the study little attention is paid to owner-occupiers because of the lack

of data at the time the study was carried out, but this chapter suggests that there are good grounds for including non-elderly owner-occupiers in a housing allowance program.

Data in chapter 4 show that the participation rate in Canadian housing allowance plans is far less than the 100 per cent often assumed and is apparently lowest for the lowest-income eligibles. Remarkably, the allowances have had very little effect on household behaviour, although there is some evidence that they may have reduced moving among single-parent families. Possible explanations for the small effect are discussed at some length – in particular, costs of a move, factors reducing the benefits of a move, and uncertainty about the future real value of the housing allowance.

The conclusion that a housing allowance has little effect on the demand for housing immediately implies that it can have little effect on the housing market. None the less chapter 5 discusses housing market theory and evidence, partly because the evidence on the effect of housing allowances is relatively short run and long-run effects could be greater, and partly because possible market effects, in particular a run-up in rents, figure so prominently in the arguments against housing allowances. Much attention in this chapter is paid to recently built urban simulation models. These have the advantage of emphasizing housing submarkets, but, despite this, the absence (in both EHAP and Canadian programs) of detectable response in the price of housing service to allowance programs is greatly at odds with the predictions of the urban simulation models, especially one for Winnipeg.

The view that a housing allowance is an income supplement as well as a housing program and the evidence that it has little effect on housing consumption make the distribution of its benefits especially important. This and the cost of the program are the subject of chapter 6. For this purpose a benchmark allowance is used. It has parameters like those of British Columbia's housing allowance – SAFER – except that its threshold rents are lower. Also used is an ICPOR with contribution rates varying according to household size, called a VCR plan. A few of the more interesting findings are noted here. First, while only a tiny proportion of the program expenditure goes to those with physical facilities better than adequate, a substantial proportion goes to those with space that is much better than adequate. This reflects the high space consumption of the elderly, overhousing that may be largely the consequence of high

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moving costs. At the same time the mean allowance for those with the highest space consumption is less than the mean allowance for those with the lowest. Second, a VCR plan costs about the same as the benchmark plan, but the share of the elderly falls sharply, and that of families rises sharply. Crowded households receive much more from a VCR plan than from the benchmark plan, but those with inadequate physical facilities receive a little less. All variants of the ICPOR are strongly progressive with respect to income, but parameter changes that make it more progressive with respect to income generally make it less progressive with respect to housing consumption.

A housing allowance is a housing program as well as an income supplement, and in chapter 7 its implications for important existing social housing programs are examined. In the first part of the chapter evidence on the effects of housing allowances on public housing in British Columbia and Manitoba is discussed. The second part of the chapter relates directly to policy. The question is asked whether the benefits and goals of public housing, non-profit housing, and private rent supplement can be achieved by a housing allowance. This leads to conclusions about the fate of these programs if a housing allowance is introduced.

In chapter 8 an ICPOR allowance is explicitly assessed as a negative income tax. For renters paying more than the threshold rent of the ICPOR allowance, indeed, the ICPOR is precisely the same as a standard negative income tax. For renters whose current rate is less than the threshold rent in the ICPOR, it is a negative income tax with the unique feature that its tax rate is reduced to the extent that a recipient would increase her rent if income increased. Thus the work disincentive in the ICPOR will tend to be less than that in a standard negative income tax with the same nominal tax rate. This chapter assesses the likely quantitative importance of the work disincentive in an ICPOR as well as the saving and portfolio allocation incentives. Also discussed is the integration of an ICPOR allowance with other income security programs, both those affecting the elderly and those affecting families.

The final chapter makes policy recommendations.

NOTES

- 1 This way of stating the point looks at housing service from the perspective of the consumer and so takes the housing service delivered by a given dwelling unit of a given, maintained structure quality as the same no matter who the occupant is. From the viewpoint of the supplier, however, a damage-causing tenant may be

regarded as one consuming more resources and so more housing service than a typical tenant occupying the same unit. Whichever view is taken, the critical result remains: so long as landlords do not charge a differential rent according to the characteristics of tenants, the profit yielded by a dwelling unit will depend on the characteristics of its occupant.

- 2 'Moving costs' and 'transactions costs' are used interchangeably in this study to refer to total costs involved in a move, including information costs, search costs, physical moving costs, and adjustment costs; and psychic costs as well as monetary costs.
- 3 So long as the initial rent is below threshold rent.
- 4 Evidence of the variation in the price of housing service is discussed in Appendix A. The price of housing service is defined by the identity: rent equals the price times quantity of housing service.
- 5 The 'starving' alternative is not as extreme as it might appear. Elderly recipients of housing allowances in Manitoba were asked how they spent the allowance. The vast majority (86.2 per cent) of respondents reported 'food,' while clothing, with the next largest response, was given by only 36.8 per cent. When asked what they would do if the allowance were eliminated, most responded that they would cut their food expenditure (Minuk and Davidson, 1981, p. 46). Only about one-quarter gave moving as an option.

2

Problems in low-income unsubsidized housing

I INTRODUCTION

A housing allowance is a program for low-income households that are not served by current social housing programs, but instead live in unsubsidized housing in the private market. This chapter examines their housing conditions as a background for the chapters to follow. The state of these housing conditions indicates the extent to which existing programs have eliminated housing problems and at the same time provides a guide for the design of a housing allowance. This chapter also provides a context for the assessment of evidence on the experience of those housing allowance programs that do exist.

Section II of this chapter defines a housing problem and the conceptual basis for the selection of problem indicators. In section III the indicators are specified. These relate to the structure, to space, to affordability, and to security of tenure. Special attention is paid to the affordability question, partly because of its connection with the contribution rate in the ICPOR formula, and this discussion leads to the specification of a variable-rate affordability indicator as well as a more conventional indicator. For security of tenure, an aspect of housing usually ignored in housing studies, three crude indicators are specified.

The housing conditions of elderly and family unsubsidized renters – the usual eligibles for social housing – are examined in section IV. Also examined are the conditions of low-income Ontario households that would be ineligible for most existing housing allowance programs. These ineligible households are a diverse group. They include family and elderly renters paying only a low percentage of their income for rent as well as owner-occupiers and non-family, non-elderly

households. The chapter closes with a summary and some concluding remarks on the policy implications of the findings.

II WHAT IS A HOUSING PROBLEM?

This chapter is concerned with determining the extent to which unsubsidized low-income households have housing problems. But what is a housing problem? It is conventionally defined as occurring when housing consumption is too low or, more precisely, when the amount of certain housing characteristics is so low that a 'safe, decent, and sanitary' life is not possible for the occupants. This definition is clearly normative. What is necessary for a safe, decent, and sanitary life is a matter of judgment.

The judgment here is that a housing condition is not a problem if it represents a situation that is little different from that of households above the poverty line. This view starts from the proposition that a housing problem is only of substantive interest if the taxpaying public believes it to be a problem and is willing to pay to help in its removal. It is assumed here that taxpayers' utility is increased when the housing problems of low-income households are ameliorated, but that donor preferences extend only to raising the level of housing consumption through the use of public funds up to the level enjoyed by barely non-poor households: it is assumed that those bearing the cost of the subsidy do not wish to help low-income households to live better than themselves.

This view is applied in selecting the housing indicators used in this chapter. For instance, the Ontario non-poor are almost as likely as the poor to have an industrial use as a neighbour,¹ and so this is rejected as an indicator of a housing problem. A second guide to the selection of indicators is simply what is easily available and commonly used (e.g. Burke, Casey, and Doepner, 1981). A third and subsidiary guide is the level of dissatisfaction with a housing characteristic, as found by Stevens (1979).²

III HOUSING CONDITION INDICATORS

Basic facilities and structure

The first category of housing problem is inadequate basic facilities and structure. For this the indicators used are lack of running water, lack of complete and private bathroom facilities, lack of central heating,

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and poor maintenance. The first two represent two distinctly different levels of plumbing inadequacy. Because they are characteristics of an individual dwelling unit rather than a whole building, in an apartment these may largely indicate a lack of privacy. The poor maintenance indicator is the *Canadian Housing Statistics* definition of poor dwelling unit condition (1976, p. 106): the existence of at least one major defect (sagging roof, sloping walls, poor foundation, or decaying wood) or at least three minor defects (e.g. sagging eaves, broken windows, poor paint).³

Space

The second category of housing problem is inadequate space. The conventional indicator of crowding is more than one person per room (e.g. Burke, Casey, and Doepner, 1981), but this does not take into account economies of scale in the use of space, especially in the case of rooms other than bedrooms. Largely for this reason, two additional indicators of crowding are used here, both explicitly based on the number of bedrooms, rather than the number of rooms.⁴ The first, 'crowded bedrooms,' assumes that a household is crowded if there is not at least one bedroom for every two people, except that for a single person there need be no bedroom at all.⁵ The second, 'very crowded bedrooms,' indicates that there is not at least one bedroom for every two persons after deducting one person. Thus if two persons sleep in a bedroom and one in the living room the household is deemed not very crowded. Because of the inherent discreteness of the number of rooms, the two criteria are the same when there is an even number of people in the household. In Table 1 the two definitions are compared and the implied number of persons per room is indicated. It can be seen that the bedrooms indicators are strongly non-linear in terms of persons per room, under the assumption that the number of rooms other than bedrooms stays constant as the number of bedrooms increases. For the particular assumption about other rooms used in Table 1, to be uncrowded according to the 'crowded bedrooms' criterion implies no more than 0.5 persons per room for a single-person household but 1.33 persons per room for an eight-person household.

It is instructive to compare these criteria with those used by granting and advisory agencies. In its specifications, the Social Planning Council of Metropolitan Toronto (SPCMT) is more demanding for a

TABLE 1
Crowding definitions compared

Number of persons in household	Minimum number of bedrooms required to be uncrowded	
	'Crowded bedrooms'	'Very crowded bedrooms'
1	0 (0.5)	0 (0.5)
2	1 (0.67)	1 (0.67)
3	2 (0.75)	1 (1.00)
4	2 (1.00)	2 (1.00)
5	3 (1.00)	2 (1.20)
6	3 (1.20)	3 (1.20)
7	4 (1.17)	3 (1.40)
8	4 (1.33)	4 (1.33)
>8	5 (1.29)	4 (1.50)

NOTE: The implied number of persons per room is given in parentheses under the assumption that a 0-bedroom dwelling contains a kitchen and one other room and that other dwellings contain a kitchen and living room in addition to bedrooms.

single adult than is the 'crowded bedrooms' criterion, for couples it is the same, and for families it is either the same or more demanding. For families the differences between the SPCMT and 'crowded bedrooms' specifications arise because the SPCMT differentiates bedroom needs according to the age and sex composition of the household (1981, p. 55). In general, the conventional normative standard is roughly two persons per bedroom with adjustments for very young children and sex differences (e.g. the citation in Stevens, 1979, p. 64). This is roughly the standard reflected by the 'crowded bedrooms' criterion.

It is interesting to contrast these normative standards with actual consumption at middle- and high-income levels. David's findings (1962) for US white renters are that even high-income renters on average add less than one room for every two additional persons above two, but households of two persons who are middle- and high-income renters on average occupy about four rooms. Thus there are apparently greater economies of scale in the use of space than indicated by the bedrooms criterion used here. The average middle- and high-income renter household would be well above the usual normative bedroom standard for small households but would just meet the standards at large household sizes.

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Affordability

The third category of housing problem is affordability. This problem exists if housing expenditure as a percentage of income is too high. The arithmetic of this ratio implies that this problem exists when the price of housing is too high, when housing consumption is too high, or when income is too low. An affordability 'problem' may exist merely because a household has a strong preference for consuming housing service or is strongly motivated by investment considerations. However, as discussed in chapter 1, an affordability problem may exist because a household pays a relatively high price for housing service for reasons over which it has little control. For instance, it may have moved recently or formed a household recently and so cannot receive a substantial length-of-tenure discount. In a market with some units under rent control it may not have managed to obtain a rent-controlled unit. An elderly person may be living in an area where rents have risen very rapidly and may not have the physical resources to move to a location where rents have risen less.

Conventional affordability ratios

The traditional unaffordability criterion is housing expenditure of more than 25 per cent of income. There was apparently a well-known saying in the nineteenth century expressing this: 'a week's wages for a month's rent' (Lane, 1977). One justification for the normative rule is the fact that middle- and upper-income families typically have a ratio substantially less than this. Reinforcing this is the remarkable constancy of the ratio. In 1981 for six provinces the ratio varied in the narrow range 0.19 to 0.22.⁶

The 25 per cent rule is enshrined in the subsidized housing rules. Twenty-five per cent of income is the maximum contribution rate in the rent scale for federal public housing (Archer, 1979, Table 2.1). This is important because it implies a government view that a household should not have to pay more than 25 per cent of its income for housing. If the government faithfully reflects the electorate, then the public believes that a ratio greater than 25 per cent represents a problem for low-income households. However, owner-occupiers are accepted for CMHC mortgage insurance when their *partial* housing cash expenses (payments of principal, interest, and property taxes) are as much as 30 per cent of income (*Canadian Housing Statistics*, 1972). More immediately relevant, the housing allowance programs in

British Columbia and Quebec require a contribution rate of 30 per cent.

Largely on the grounds that British Columbia's SAFER uses a 30 per cent rate and that most recent housing allowance studies use the 30 per cent rate as at least one of those considered (e.g. Canada, Treasury Board, 1979; Clayton and Associates, 1981), the first unaffordability criterion used here is the 30 per cent rate.

Ratios varying by household size

A major objection to the 30 per cent criterion is that it does not take into account variations in household size. There are two reasons why the affordability ratio should vary with household size. First, larger households must spend more money on non-housing goods, in particular food and clothing, if they are to achieve the same level of utility as smaller households. Deaton and Muellbauer estimate, using the Barten model, that a household with one child aged 5-16 and two adults requires 47 per cent more expenditure on food and 48 per cent more expenditure on clothing to achieve equivalence with a two-adult household (1980, p. 203). Second, and closely associated, non-poor large households spend a lower percentage of their income on housing than do non-poor small households. Thus, if the fundamental criterion for a housing problem is the relative absence of that condition among non-poor households, the unaffordability threshold must vary by household size.

Evidence on which to base affordability ratios varying by household size is presented in Table 2. The rent-to-income ratios there are all calculated at a poverty-line income, taken as the dividing line between low and middle income. The Stevens (1979) and Steele (1979) ratios both use as poverty lines the Statistics Canada low-income cut-offs. These are based on the Engel model of consumer behaviour (Deaton and Muellbauer, 1980), and each is defined as that income at which it is estimated a family spends 62 per cent of its income on necessities.⁷ The poverty lines used for the third set of ratios (using Municipality of Metropolitan Toronto Planning Department, 1980) are based not on household behaviour but on the expert judgment of requirements for an 'adequate standard of living' from the SPCMT. They are substantially higher than the Statistics Canada low-income cut-offs which are in turn substantially lower than the widely used Montreal Diet Dispensary's minimum monthly budgets.⁸

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TABLE 2
Alternative poverty-line rent-to-income ratios

Size of household	Stevens	Steele	Ratford
1	0.39	0.44	0.38
2	0.31	0.34	0.28
3	0.27	0.29	0.27
4	0.26	0.26	0.23
5	0.25	0.24	0.23
6	0.22	0.23	0.21

SOURCES:

Stevens: Stevens, 1979, Table 28, p. 81, estimated ratio at poverty line in Winnipeg.

Steele: Computed from the regression for Toronto CMA renters with 1970 income less than \$7,500 (Steele, 1979, Table 7.8, p. 194). For estimation of rent, measured income is the 1970 Statistics Canada revised low-income cut-off, and this is divided into permanent and transitory income components by taking the ratio of permanent income to observed income as equal to the ratio of regression sample means. In addition, the one-person household is assumed to be female, aged 70, with 7 years of education, and not single. The two-person household has head female, age 35, 10 years of education, and not single, and one child. Other household sizes have head married male, age 35, 9 years of education, one other adult, with remaining household members children. For the ratio computation, 1970 poverty-line income is inflated to 1971 using average hourly earnings in manufacturing.

Ratford: Computed from data in Municipality of Metropolitan Toronto Planning Department, 1980. Rent is taken from rents given on p. 18. Income is 'minimum income required to afford a basic shelter package' (Table 3, p. 19) for one- and two-person households and Appendix 4B, p. A12 for other sizes. The ratio given here for a one-person household is for the elderly; for two-person households, one adult and one child; for three- and more-person households, two adults, with the remaining household members children.

A striking aspect of all three sets of ratios in Table 2 is the great difference between the ratio for one-person households and that for two-person households. The Steele and Ratford sets of ratios both show a drop of 10 percentage points going from a one- to a two-person household. The two behaviour-based ratios (Stevens and Steele) show a further, though less substantial, drop from two- to three-person households, and all three sets show only a small decline as households get larger than this. While the ratios here for singles, especially the 44 per cent in the Steele set, may look very high by conventional standards, they are entirely consistent with the experience of housing allowance programs. In British Columbia in 1978, 58 per cent of SAFER recipients in the Vancouver and Victoria area had ratios over 45 per cent.⁹ Certainly the ratios in Table 2 suggest that 30 per cent is

much too low as an affordability threshold for one-person households and too high for typical-sized families. Put another way, if 30 per cent is taken as a problem ratio for a couple, only a ratio much higher than this indicates a problem for singles and a ratio substantially lower than this for households of three or more.¹⁰

The evidence in favour of a variable affordability ratio does not strongly point to any single set of numbers. The set used below is essentially a stylized version of those in Table 2. Specifically it is 40, 30, 25, 22.5, 20 for households of one, two, three, four, and five or more persons respectively.

An objection to this affordability criterion is its neutrality with respect to income. It specifies a single ratio for a household of a given size, no matter what its income. However, it would make little difference if the progressive alternative of specifying lower ratios for lower incomes were adopted, because households actually tend to spend a higher percentage of their income on housing the lower their income. Recent estimates of income elasticity for housing are far below 1 (Steele, 1979; Hanushek and Quigley, 1979). Thus virtually all sub-poverty-line households identified as having an affordability problem according to a criterion with ratios lower than the set of 40, 30, 25, 22.5, 20 will also have a problem with this set.

Security of tenure

The fourth and final category of housing problem is usually overlooked: security of tenure. A household may be defined as having this problem if there is a substantial probability that it will be forced to move. Eviction means incurring transactions costs involuntarily. Some cash costs of moving are obvious – the cost of moving furniture and other goods and the cost of redecorating. There are also substantial time costs, especially if the housing market is tight. Searching for accommodation takes time, and it also takes time to gather information about neighbourhood services in the new location. Another cost is the loss of the substantial discount for long-term renters (Kain and Quigley, 1975). A mover, all things being equal, pays more for a given bundle of housing than a non-mover. There are also psychic costs of moving. This has been identified as important by Michelson (1970, as cited in Stevens, 1979). Michelson concludes that 'a forced change of residence induces a psychiatric syndrome more directly than many other changes of environment' in a review that also concludes that the physical condition of housing has little effect

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on social and medical pathologies. Thus negative externalities of poor housing associated with the behaviour of the occupants may have their source less in the poor physical condition of their housing than in their insecurity of tenure.¹¹

Three indicators are used here for security of tenure: having moved within the last year, four or more moves within three and one-third years, and an 'other' reason for moving from the previous dwelling. 'Other' is a residual category in a list that includes reasons associated with change in housing consumption, with change in tenure, and with transportation.¹² Clearly these are only crude indicators of security of tenure. Specifically, a frequent mover may not be involved in forced moves, but instead may be an optimizer with low transactions costs. And the 'other' reason for moving need not be eviction. None the less using imperfect indicators is surely better than completely ignoring security of tenure.

IV HOUSING CONDITIONS OF LOW-INCOME HOUSEHOLDS IN ONTARIO

In this section the housing conditions of unsubsidized low-income households¹³ are discussed, using tables showing housing conditions both by income level and by urbanization level.¹⁴ Housing conditions are shown for non-poor households as well as poor households on the assumption that taxpayers are unlikely to wish to subsidize the elimination of a problem for low-income households unless they themselves are clearly better off. Another reason for estimating housing conditions by income level is that some housing subsidies serve more than one income group. Housing conditions are shown by urbanization level because of the immense variation in housing conditions between rural and highly urbanized places and because of the difference in the kinds of housing policies that are feasible in these areas.

Further, households are divided into groups that are the main target for existing social housing programs and housing allowance programs and those that are not. In the 'eligibles' are elderly renters and family renters; in 'ineligibles' are family and elderly owner-occupiers, non-elderly, non-family households, and households that would be eligible for most social housing programs but not be for a housing allowance that requires a minimum 30 per cent rent-to-income ratio. It is especially important to examine this last group of ineligible because it helps indicate the extent to which the 30 per cent criterion cuts off those paying a relatively low price for housing rather

than those consuming a relatively small amount of housing service.

Elderly renters

Elderly renters are perhaps the most common target group for low-income housing programs, especially in recent years (Rose, 1980), and of the existing housing allowance programs in Canada only the Manitoba program helps people outside this group. This fact makes this group of special interest. Is it a target because its housing is inferior to that of other groups?

The answer is no, if low-income elderly renters are compared to other low-income households. In Ontario's large urban centres, poor elderly renters have about the same incidence of missing basic facilities as other poor people (Tables 3 and C1), and their housing is much less likely to be in a poor state of repair. Further, because relatively few poor elderly renters live in rural areas, where the incidence of missing basic facilities is high, they are overall clearly better off in terms of basic facilities than other low-income households.¹⁵

Poor elderly renters are virtually universally uncrowded according to all three criteria used here.¹⁶ When a much more demanding criterion is used, the criterion of less than 225 square feet per person (*Canadian Housing Statistics*, 1976, Table 124), the incidence of crowding for Ontario is only about 5 per cent – roughly a mere one-quarter of the incidence for all poor renters. It seems plausible that the typical resident of an old age home, lodge, or nursing home would not get nearly as much space as the typical poor elderly renter.

The elderly as low-cost tenants

The general picture of well-housed poor elderly renters is not changed by the indicators of security of tenure. The poor elderly are very infrequent movers, like the elderly at other income levels. And the proportion of poor elderly who have moved for 'other' reasons is relatively low.¹⁷ This is not surprising. It costs less to deliver housing service to the poor elderly than to other poor households. They are desirable tenants. They have the steady income – payments under Old Age Security (OAS), Guaranteed Income Supplement (GIS), and Guaranteed Annual Income System (GAINS) – to make them good credit risks. They are constrained by their physical limitation from throwing loud parties and damaging property and perhaps have no taste for these activities.

TABLE 3
Incidence of housing indicators among elderly renting households by income by area, for Ontario (percentage)

Indicator ^a	Urban centres with a population of 100,000 or more				Other urban areas			
	Income class ^a		Income class ^a		Income class ^a		Income class ^a	
	Y < P	P < Y < 2P	Y > 2P	Y < P	Y < P	P < Y < 2P	Y > 2P	Y > 2P
<i>Basic facilities and structure</i>								
No running water	0.0	0.0	(0.0)	[2.6]		[0.0]		[0.0]
No full bath exclusive use ^c	3.1	0.0	(0.0)	[6.5]		[4.9]		[0.0]
No central heating ^d	2.0	1.4	(0.0)	[15.7]		[7.2]		[0.0]
Poor maintenance ^e	2.5 ^b	2.4 ^b	2.8 ^b	n/a		n/a		n/a
Built before 1940	7.2	25.2	(12.5)	[45.6]		[48.9]		[25.7]
<i>Space</i>								
> 1 person per room	0.0	0.0	(0.0)	[0.0]		[5.3]		[0.0]
Crowded bedrooms ^f	0.0	0.0	(1.8)	[0.0]		[5.3]		[0.0]
Very crowded bedrooms ^f	0.0	0.0	(0.0)	[0.0]		[5.3]		[0.0]
<i>Affordability</i>								
Housing expense > 30 per cent of Y	68.2	51.4	(5.3)	[71.2]		[18.5]		[0.0]
Housing expense > variable percentage of Y ^g	60.6	31.7 ^b	(0.0)	[58.8]		[9.2]		[0.0]

TABLE 3 (continued)

Indicators ^a	Urban centres with a population of 100,000 or more				Other urban areas			
	Income class ^c				Income class ^c			
	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	Y > 2P
<i>Security of tenure</i>								
Occupied < 1 year	10.2 ^b	10.3 ^b	16.4 ^b	n/a	n/a	n/a	n/a	n/a
≥ 4 moves in 3½ years	0.0 ^b	0.0 ^b	0.0 ^b	n/a	n/a	n/a	n/a	n/a
*Other ^d reason for last move	5.7 ^b	3.9 ^b	3.3 ^b	n/a	n/a	n/a	n/a	n/a

a Y refers to 1976 household income in the case of HIFE indicators and 1974 income for SHU indicators; 1976 income was estimated by projecting forward 1975 income given in the HIFE data base, and 1974 income was estimated by projecting forward 1973 income given in SHU. P refers to the Statistics Canada low-income cut-off: for HIFE indicators, the 1976 cut-off, and for SHU indicators, the 1974 cut-off.

b Estimate is for urbanized core of Census Metropolitan Areas (CMAs).

c Exclusive use of bath or shower and of toilet.

d Principal heating equipment: furnace or electricity.

e At least one major defect or at least three minor defects.

f For definition see Table 1.

g Housing expense to income ratio > 40 per cent for one-person households, > 30 per cent for two-person households, > 25 per cent for three-person households, > 22.5 per cent for four-person households, and > 20 per cent for households with five or more people.

NOTE: Round brackets indicate that the estimate is based on 25-49 observations; square brackets, 10-24 observations. All rural area income groups contain less than 10 observations, and so estimates for them are omitted.

SOURCES: Weighted estimates for unsubsidized households were computed using Statistics Canada, 1976 Household Income, Facilities and Equipment (HIFE) Micro Data File (1975 Incomes) except for the 'poor maintenance' indicator and the security of tenure indicators, which are computed using Survey of Housing Units (SHU), 1974.

Some evidence for the low-cost characteristics of the elderly poor is available from a survey of landlords participating in the Rent Supplement Program (Ruston et al, 1979). In this program a monthly subsidy is paid directly to a private landlord while the subsidized tenant pays according to the public housing rent scale (see chapter 7). The survey (Table 4) found that landlords have a very strong preference for elderly tenants, especially relative to single-parent families. Even landlords, who have found Rent Supplement single-parent families sufficiently profitable to be at least acceptable, strongly prefer elderly tenants.¹⁸ The general importance of tenant characteristics to landlords is shown by the fact that 66 per cent suggested improvements to Rent Supplement that relate to better control of tenants (Table 4, part C). The greatest problem identified by landlords – vandalism – is almost surely a problem not experienced with elderly tenants. Landlords who cancelled Rent Supplement units – and whose Rent Supplement tenants were perhaps forced to move as a consequence – did so in large part because of 'tenant problems'.¹⁹

The picture of low-income elderly renters as a group virtually free of housing problems finally changes when affordability is considered. According to the variable contribution rate criterion about 60 per cent of them have a problem. Thus, low-income elderly renters live in adequate, spacious housing, but most of them spend so much for it that their consumption of food and other goods and services apparently is jeopardized. It is important, however, to put this fact in perspective. The frequency of an affordability problem among all low-income households (see Table C1) is substantially greater than among low-income elderly renters.²⁰

Marginally non-poor elderly renters

This discussion of elderly renters would not be complete without mention of a striking fact. While elderly poor renters have fewer housing problems than other poor households, the picture is much more mixed for low-middle-income elderly renters compared to other households in the same income class. For instance, for Ontario the differential between other households and elderly renters in the incidence of dwellings in a poor state of repair is much less for the low-middle-income than for the poor. Even more noteworthy is the higher incidence of affordability problems among elderly renters. According to the variable rate criterion, among low-middle-income households in

TABLE 4
Ontario rent supplement landlord survey findings

A. Landlord's rent supplement tenant preferences

	All rent supplement landlords (percentage)	Landlords with single-parent families as rent supplement tenants (percentage)
Families		
Single-parent	2	8
Other	21	n/a
Singles < 65 years	9	n/a
Seniors	68	58

B. Landlord problems^a

	Percentage
Vandalism	50
Breaking rules	31
Slow rent	12
Other	7

C. Suggested improvements in the rent supplement program

	Percentage
Tenants	
Better 'class' of	28
More choice of	21
More control of	17
More efficient public housing authority	20
One rent cheque instead of two	10
No changes needed	25
Other	4

^a The group surveyed here includes only landlords who have encountered more problems with their rent supplement tenants than with their other tenants. These are 27 per cent of landlords surveyed.

SOURCE: Ruston et al, 1979, pp. 13, 14, 18.

large urban areas in Ontario, there is an affordability problem for 31 per cent of family renters but for 40 per cent of elderly renters. The differential is much greater using the flat 30 per cent rule. It is

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possible that the high incidence for the elderly arises merely because they are concentrated, perhaps, at the low end of the low-middle-income group (they may have little income to augment government transfer payments). In addition, the typical low-middle-income elderly renter may occupy a unit first occupied before retirement or before the death of a spouse, when household income was much greater.

One implication of the relatively mediocre housing conditions of low-middle-income elderly renters is that where housing subsidy programs are targeted at households somewhat above the poverty line as well as those below, elderly households make much more sense as a target subgroup.

Family renters

A second major housing target group is poor families – i.e. a poor single adult or a couple, with at least one child aged less than 18. The Manitoba housing allowance program delivers rent subsidies to this group as well as to the elderly.²¹ In Ontario this group, along with the elderly, is eligible for public housing. The targets of housing programs for the poor can be characterized in general as those who are unable to work because they are too old or too young. In the latter case the accompanying parents are also helped.

Low-income renting families in large urban areas are, as Table 5 shows, distinctly worse housed than low-income elderly renters. Far more of them live in poorly maintained housing. However, very few lack basic facilities, reflecting the virtually universal presence of such facilities in large urban areas.

There is a very different housing picture in rural areas. The incidence of no central heating there is 21 per cent; the incidence of no bathroom is even higher. The presence of basic facilities is very strongly associated with income in rural areas.²² Unsanitary, hazardous, uncomfortable, and inconvenient heating and plumbing systems are very strongly inferior goods.

Structure maintenance

Poor structure maintenance is also an inferior good, but, as the Ontario data for large urban areas show (Table 5), it is not as inferior a good as primitive heating and plumbing facilities. Evidently, rather substantial numbers of upper-income households are prepared to live

TABLE 5
Incidence of housing indicators among renting family households by income by area, for Ontario (percentage)

Indicator ^a	Urban centres with a population of 100,000 or more			Other urban areas			Rural areas		
	Income class ^a			Income class ^a			Income class ^a		
	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P
<i>Basic facilities and structure</i>									
No running water	0.0	0.0	0.0	(0.0)	1.7	(0.0)	[11.8]	[5.2]	[(0.0)]
No full bath exclusive use ^c	0.0	0.6	0.0	(0.0)	1.7	(0.0)	[23.5]	[10.4]	[(6.2)]
No central heating ^d	2.8	2.4	0.0	(2.2)	8.3	(8.7)	[18.0]	[19.9]	[(0.0)]
Poor maintenance ^e	12.9 ^b	6.4 ^b	3.9 ^b	n/a	n/a	n/a	n/a	n/a	n/a
Built before 1940	26.0	19.1	20.0	(43.7)	36.9	(36.5)	[41.3]	[64.4]	[(62.4)]
<i>Space</i>									
> 1 person per room	9.7	10.8	3.1	(4.3)	2.5	(6.6)	[35.6]	[10.1]	[0.0]
Crowded bedrooms ^f	14.1	18.2	8.6	(23.0)	2.2	(11.3)	[29.3]	[5.2]	[0.0]
Very crowded bedrooms ^f	6.9	2.9	0.0	(2.0)	1.1	(6.6)	[23.5]	[0.0]	[0.0]
<i>Affordability</i>									
Housing expense > 30 per cent of Y	72.8	12.0	1.4	(76.3)	4.7	(0.0)	[70.7]	[0.0]	[0.0]
Housing expense > variable percentage of Y ^g	77.1	19.3	1.4	(78.6)	12.6	(0.0)	[82.4]	[4.8]	[0.0]
<i>Security of tenure</i>									
Occupied < 1 year	40.9 ^b	35.7 ^b	26.0 ^b	n/a	n/a	n/a	n/a	n/a	n/a
≥ 4 moves in 3½ years	13.3 ^b	5.8 ^b	3.5 ^b	n/a	n/a	n/a	n/a	n/a	n/a
'Other' reason for last move	13.1 ^b	9.1 ^b	8.6 ^b	n/a	n/a	n/a	n/a	n/a	n/a

NOTE: Round brackets indicate estimate based on 25-49 observations; square brackets, 10-24 observations. Otherwise, sources and notes a to g as for Table 3.

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in housing with an unpleasing exterior – perhaps with poor paint, missing shingles, and loose bricks.²³

The existence of a substantial number of poorly maintained dwellings in large urban areas is a striking contrast to the basic facilities situation. In large urban areas basic facilities are almost universally adequate but maintenance is not, probably in large part because of differences in the nature of regulation and its enforcement. The provision of basic facilities is covered by building codes and land servicing requirements for new buildings and additions to buildings.²⁴ At only one or two points of time in the life of a typical building would these regulations have to be invoked, but enforcement of maintenance rules is a continuous and so much less easy task.²⁵

There is an implication for the true income elasticity of maintenance arising from this situation. If one assumes that these rules are enforced substantially in response to neighbourhood complaint,²⁶ one would expect that upper-income households would be relatively highly constrained in their consumption of poorly maintained housing, on the presumption that residents in upper-income neighbourhoods are relatively likely to be affected by negative externalities and relatively likely to complain. The *unconstrained* choice of high-income households would thus be even more like the *actual* choice of poor households than the observed pattern here. This reinforces the point that poor maintenance is not as strongly an inferior good as primitive plumbing and heating facilities.

Space

The space consumption of low-income family renters is dramatically different from that of elderly low-income renters. While in large urban areas virtually none of the elderly is crowded, 14 per cent of families are, according to the crowded bedrooms criterion. More important, 6 per cent of families are very crowded. Surprisingly, the incidence is even greater than this in rural areas.²⁷

Interpretation of the facts on crowding in large urban areas is clouded because according to both the persons-per-room and crowded-bedrooms criteria the incidence of crowding is greater among the low-middle-income group than among the poor.²⁸ This casts some doubt on the use of both as indicators of a 'problem' and, *a fortiori*, on the appropriateness of the normative crowding standards used by agencies such as the Metropolitan Toronto Social Planning Council (SPC). The SPC regards a single parent living with a child in a one-bedroom apart-

ment as unacceptable, but this is not crowding according to the crowded-bedrooms standard used here; the SPC regards a couple with a six-year-old boy and a seven-year-old girl living in a two-bedroom apartment as unacceptable, but this is not crowding by the crowded-bedrooms standard. Yet even according to the relatively tough crowded-bedrooms criterion, 17 per cent of low-middle-income renters in large urban areas are crowded. The incidence of SPC crowding would clearly be much greater.

The relationship of income and crowding is very different outside large urban areas. There, crowding decreases greatly from the low-income category to the low-middle-income category. This is perhaps associated with the fact that in rural areas, and to some extent in small urban areas, families are able to choose whether to consume a structurally inadequate, spacious bundle of housing service or a standard-quality, low-space bundle, or some other bundle. In large urban areas the structurally inadequate bundle is virtually unavailable. In other words, a substantial proportion of low-middle-income families may be forced into crowded accommodation because of the absence of physically deficient but spacious accommodation. Thus, an alternative interpretation of the relation between occupancy standards and income is that a substantial proportion of low-middle-income renting families are living in housing even they would regard as crowded and indeed would not occupy if their housing choice were unconstrained.

Security of tenure

The values for the security-of-tenure indicators in Table 5 provide substantial support for the proposition that among low-income family renters high mobility is associated with low income. While only 3.5 per cent of high-income families in large urban areas moved four or more times in three years, 13.3 per cent of poor households did. Further, the last move of high-income households occurred for 'other' reasons 8.6 per cent of the time but for poor households 13.1 per cent of the time. More interesting, while crowding does not improve much until income rises above the low-middle level, most of the apparent improvement in security of tenure occurs at the stage when income rises from the poverty level to the low-middle level. Thus security of tenure is a greater problem for the poor than is crowding. This is based on the proposition that a housing condition is a stronger candidate for the label 'problem' the greater the difference in its incidence

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between those who are part of the target group for subsidy and those who are on the margin between being subsidized and funding the subsidy.

Of course the elevation of insecurity of tenure to the position of a more important problem than crowding must be surrounded with caveats. The major caveat is that the reason for frequent moves is not known, and many, no doubt, were freely undertaken in order to optimize housing consumption. But it is possible that the importance of insecurity of tenure is much greater than the low incidence of frequent movers, *prima facie*, would suggest. A forced move, unlike the consumption of a housing bundle containing poor heating and plumbing and little space, is not the certain consequence of the household's decision process. It is inherently not easy for the household to control. As long as households are risk averse and dislike uncertainty, the disutility of insecurity of tenure is greater than the mathematical expectation of incurring the costs of a forced move. The cloud of uncertainty over their tenure may substantially reduce the welfare of poor households who never in fact are forced to move.

Affordability

The final problem category is affordability. On both criteria used here, this problem is of almost overwhelming importance. Its incidence is very high compared to the incidence of other problems: using the variable percentage of income criterion, 79 per cent of low-income families in large urban areas have a problem. The incidence is even greater outside large urban areas.

V THE INELIGIBLES

Disqualified elderly and family renters

An ICPOR housing allowance requires that to be eligible a household must pay more than a set proportion of its income for rent (see Table 6). In British Columbia's SAFER, this is set at 30 per cent. A major rationale for this is the proposition that many of those paying less than 30 per cent are not consuming less housing service but rather are the beneficiaries of a low price of housing service. In this section evidence is adduced on this point by examining the housing conditions of elderly and family renters paying less than 30 per cent of income for rent.

TABLE 6

Incidence of selected housing indicators among elderly and family renting households with rent less than 30 per cent of income and with income less than twice the poverty line, by income by household type, for Ontario (percentage)

Indicator ^a	Income class ^d	
	$Y < P$	$P \leq Y < 2P$
<i>Elderly households</i>		
No full bath exclusive use ^c	(3.8)	(1.7)
No central heating ^d	(3.0)	(5.4)
Poor maintenance	(6.0) ^b	4.6
Built before 1940	(5.3)	(34.3)
Crowded bedrooms ^f	(0.0)	(1.8)
Housing expense > variable percentage of Y^g	(0.0)	(0.0)
Occupied < 1 year	(1.8) ^b	7.0 ^b
<i>Family households</i>		
No full bath exclusive use ^c	(5.7)	1.4
No central heating	(4.3)	5.0
Poor maintenance ^c	12.7 ^b	7.1 ^b
Built before 1940	(35.7)	26.9
> 1 person per room	(20.7)	9.7
Crowded bedrooms ^f	(29.2)	14.8
Very crowded bedrooms ^f	(16.1)	2.6
Housing expense > variable percentage of Y^g	(62.4)	23.6
Occupied < 1 year	25.0 ^b	36.0 ^b
≥ 4 moves in 3½ years	7.0 ^b	5.9 ^b
'Other' reason for last move	7.0 ^b	8.4 ^b

NOTE: Round brackets indicate estimate based on 25-49 observations; otherwise, sources and notes a to g as for Table 3.

First, consider the elderly. It can be seen from Table 6 that virtually all of them paying less than 30 per cent of income for rent are well housed. There is no evidence that their relatively low expenditure on housing service has resulted in living conditions that are distinctly worse than those paying more. On the contrary, there are indications that they are more likely to be recipients of rent bargains than other elderly renters. In particular, a strikingly lower proportion

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of them moved in the last year than in the case of all elderly renters, and so more of them would be receiving long-tenure rent discounts.

The picture is less clear for low-income families paying less than 30 per cent of income for rent. While their incidence of missing facilities and poor maintenance is little different from that for their eligible counterparts, they are substantially more crowded: 14 per cent are very crowded and this is about twice as great as the incidence among eligibles. However, many fewer of them moved in the last year, so that they are substantially more likely to be receiving a long-tenure rent discount.

In sum these data suggest that elderly and family renters who would not be assisted by a housing allowance – unless they increased their rent payments – in very large part are managing to live in adequate and suitable accommodation. The exceptions are some very crowded family renters.

Elderly and family owner-occupiers

Most existing housing allowance schemes exclude owner-occupiers. Are their housing problems much less than those of renters? No. As Table 7 shows,²⁹ the problems of low-income owners may be described as different from those of renters rather than less great. Reflecting the fact that a relatively high proportion of them live in rural areas and in very old houses, they have a substantially higher incidence of missing basic facilities than do renters. This inadequacy problem is especially high for elderly owner-occupiers. Family owner-occupiers have nearly as high an incidence of crowding as their renting counterparts, but it falls sharply as income increases, while it does not for renters. Perhaps this difference is associated with the greater availability of larger dwellings for owners than renters.

Unsurprisingly, low-income owning families are apparently much better off than renters with respect to security of tenure. In the urbanized core of CMAs the incidence of those moving very frequently and with 'other' reason was in each case 3 per cent, far below the incidence for renters. It is surprising, however, that on the affordability criterion low-income owners in Ontario CMAs do not do very much better than renters. Housing expense for owners is defined here as cash flow cost, i.e. payments of mortgage principal and interest, property tax, utility charges, and maintenance expense, the latter assumed at \$300.³⁰ The maintenance expense assumption may be substantially

TABLE 7

Incidence of selected housing indicators among family and elderly owner-occupier households with income less than twice the poverty line, by income by household type, for Ontario (percentage)

Indicator ^a	Income class ^a	
	$Y < P$	$P \leq Y < 2P$
<i>Elderly households</i>		
No full bath exclusive use ^c	7.1	6.7
No central heating ^d	16.0	7.7
Poor maintenance ^e	4.1 ^b	7.4 ^b
Built before 1940	61.5	53.5
Housing expense > 30 per cent of Y	74.4 ^b	14.8 ^b
Housing expense > variable percentage of Y ^g	69.8 ^b	10.0 ^b
Occupied < 1 year	1.2 ^b	0.2 ^b
<i>Family households</i>		
No full bath exclusive use ^c	6.0	0.9
No central heating ^d	7.4	2.2
Poor maintenance ^e	9.5 ^b	4.1 ^b
Built before 1940	38.3	22.9
> 1 person per room	14.8	5.6
Crowded bedrooms ^f	12.9	4.2
Very crowded bedrooms ^f	5.7	1.0
Housing expense > 30 per cent of Y	78.3 ^b	20.6 ^b
Housing expense > variable percentage of Y ^g	83.7 ^b	40.4 ^b
Occupied < 1 year	11.4 ^b	7.8 ^b

NOTE: Sources and notes a to g as for Table 3.

too high. Further, the cash flow cost will tend to overstate true economic cost the greater is capital gain.³¹ An offset to this is the omission from cash flow cost of an imputed return to the owner's equity. Because the elderly are very likely to have paid off their mortgage, cash flow cost is relatively likely to understate their economic cost. None the less, in the urbanized core of Ontario CMAs in 1974, the majority of poor elderly owners had an affordability

problem.³² Two facts reduce the significance of this, however. First, if income had been defined to include the imputed return to home equity, the income of these owners would have been greater and accordingly, the estimated incidence of an affordability problem would have been lower. Second, the incidence of owners with an affordability problem drops dramatically as income rises just above the poverty line, in contrast to the situation with renters.

In sum, the findings suggest that low-income family owners give up a small amount of some kinds of housing service they might have obtained if they had been renters, in order to obtain security of tenure now and in their old age and a somewhat lower housing expenditure. Low-income elderly owners give up a quite large amount of some kinds of housing service in order to get a lower housing cash outlay.

Non-elderly, non-family households

Very few housing programs are designed to assist households that are both not elderly and without children aged under 18. This residual category contains a diverse population. For example, it includes three 19-year-old students sharing an apartment, a 59-year-old widow living alone, and a 45-year-old man living with his wife and three children aged 20, 21, and 22.

What are the housing conditions of this group? Exceedingly few of them are crowded (Table 8). Taking this together with facts given earlier, it can be seen that crowding is a problem confined to households with children. The incidence of structure problems varies greatly according to tenure. Over two-thirds of those below the poverty line are renters, and they have a somewhat higher incidence of poorly maintained dwellings than other renters. Low-income 'other' owners have conditions like those of low-income elderly owners.

The security of tenure indicators used throughout this chapter are probably poor indicators of security of tenure for this group, because it includes young single people who, not having young children and not having had the time to accumulate many durable goods, would not incur substantial transactions costs when moving house. Moving frequently may be optimal behaviour for them. Thus, while 8.5 per cent of renters below the poverty line moved four times or more within the preceding four years, 5.1 per cent of the highest-income group did as well. Another of the security of tenure indicators, 'other' reason for last move, is strongly related to income for poor 'other' renters. This may indeed be an indicator of forced moves. Alternatively, it is

TABLE 8

Incidence of selected housing indicators among non-elderly, non-family households with income below twice the poverty line, by income class, for Ontario (percentage)

Indicator ^a	Income class ^a	
	$Y < P$	$P \leq Y < 2P$
<i>Owner-occupier households</i>		
No full bath exclusive use ^c	10.4	3.1
No central heating ^d	12.9	6.4
Poor maintenance ^e	5.9 ^b	3.5 ^b
Built before 1940	42.5	37.3
Crowded bedrooms ^f	0.0	0.3
Housing expense > 30 per cent of income	74.5 ^b	22.8 ^b
Housing expense > variable percentage of incomes ^g	71.1 ^b	27.3 ^b
Occupied < 1 year	5.5 ^b	8.4 ^b
≥ 4 moves in 3½ years	0.2 ^b	0.4 ^b
'Other' reason for last move	6.3 ^b	1.1 ^b
<i>Renter households</i>		
No full bath exclusive use ^c	5.2	2.3
No central heating ^d	3.0	1.7
Poor maintenance ^e	13.9 ^b	9.4 ^b
Built before 1940	41.3	32.9
Crowded bedrooms ^f	2.7	1.7
Housing expense > 30 per cent of income	85.0	40.7
Housing expense > variable percentage of incomes ^g	82.4	24.7
Occupied < 1 year	46.7 ^b	45.3 ^b
≥ 4 moves in 3½ years	8.5 ^b	8.2 ^b
'Other' reason for last move	18.1 ^b	9.8 ^b

NOTE: Sources and notes a to g as for Table 3.

possible that the 'other reason' is frequently the job change of an apartment-sharer which required the respondent to move in with others, or the desire to leave the parental home, or a couple splitting up.³³

The incidence of affordability problems is about the same for poor 'other' renters below the poverty line as for poor family renters, but this incidence is almost precisely the same for poor 'other' owners as for elderly owners. Indeed, in general, poor 'other' owners have conditions very much like poor elderly owners. Poor 'other' renters, presumably a much younger group, have a markedly greater incidence of problems than poor elderly renters, but like elderly renters are virtually universally uncrowded.

VI SUMMARY AND CONCLUSION

The aim of this chapter has been to determine the extent and nature of housing problems among unsubsidized low-income households in Ontario. These are the households that are not reached by social housing programs. The state of their housing helps indicate whether existing social housing programs should expand or contract and at the same time provides a guide for the design of a housing allowance program and a context to aid in the interpretation of evidence from existing allowance programs in other provinces.

The first question this chapter asks is 'What is a housing problem?'. The answer depends on donor preferences. The particular assumption about donor preferences made here is that only if a housing condition is distinctly worse for low-income households than for those funding the subsidy are donors prepared to pay to help eliminate it. Non-poor households are assumed not to wish to assist poor households to live better than themselves. Thus one criterion guiding the specification of an indicator is that its incidence should be distinctly greater for low-income households than for other households.

The first set of indicators relates to basic facilities, including central heating and maintenance. The second set relates to space. Because of evident economies of scale, the conventional indicator, 'more than one person per room,' is supplemented by two non-linear indicators. These are defined in terms of persons per bedroom. The third set of indicators relates to security of tenure. This aspect of housing is usually ignored, despite evidence that many low-income families strongly value it (see chapter 7) and despite the fact that its absence may be more important in generating negative behavioural externalities than are structural problems (Michelson, 1970, as cited in Stevens, 1979). The indicators used are, unfortunately, very crude.

The fourth and final set of indicators relates to affordability. 'Affordability' is of an entirely different nature than the other

categories. An affordability problem may arise because income is too low, housing consumption too high, or the price of housing service too high. A household may pay a relatively high price for housing or consume a relatively large amount for reasons over which it has little control. Conventional affordability norms are 25 per cent or 30 per cent of income; the latter is used here. Also used is a ratio of 40 per cent of income for one-person households with lower ratios for larger household sizes. The rationale for this is the larger amounts of food and other goods needed by larger households and the evidence that households at the poverty line show ratios strongly declining by household size.

Consistent with the view that a housing condition is not a problem of substantive interest unless it is distinctly worse for low-income households than for higher-income households, the housing indicators are shown separately by income group. First examined are the two household groups that are the primary targets for social housing programs – elderly renters and family renters. The finding is that low-income elderly renters are almost universally well-housed and apparently have little problem with security of tenure. This is consistent with the view that they are low-cost tenants, a view plausible on *a priori* grounds and corroborated by the perceptions of surveyed landlords. Essentially the only problem most elderly renters face is affordability. Although the incidence of this is great, it is not so great as for other low-income households. It is therefore somewhat surprising that the poor elderly are such popular program targets. Perhaps one reason is the very substantial incidence of affordability problems among those just over the poverty line.

Low-income family renters are much more apt than elderly renters to be lacking basic facilities, largely because they are much more apt than elderly renters to live in small towns and rural areas. They are also much more likely to live in poorly maintained housing. More striking is the substantial incidence of severe crowding: 7 per cent of low-income family renters in large Ontario urban areas have less than one bedroom for every two or three household members. Another problem for poor family renters is apparently security of tenure. In addition, far more poor than non-poor family renters moved extremely frequently. But the overwhelming problem of low-income family renters is affordability.

There are two clear implications of these facts. First, low-income family renters are far more in need of assistance than low-income

elderly renters, so that the recent focus on the elderly is perverse. Second, a cash assistance program is far more justified than an expansion of programs such as public housing which better the physical housing conditions of the poor. The overwhelming problem of low-income renters is affordability, not bad housing, and it makes sense to direct programs to help the major problem, not the minor problem. One caveat is necessary, however. Programs such as public housing provide security of tenure, availability, and other characteristics (see chapter 7) which private-market rental housing often cannot. To the extent that these characteristics are desirable, the existence and perhaps expansion of many current housing programs are warranted.

A major element of an ICPOR allowance is the requirement that recipients spend some minimum percentage of their income on rent. One rationale for this is the hypothesis that many of those spending less are not consuming appreciably less housing service but instead are the lucky beneficiaries of a bargain price of housing service. This chapter shows that the situation of ineligible elderly renters is consistent with this hypothesis. The only striking difference between them and their eligible counterparts is their much lower mobility, implying that more of them would be receiving a long-tenure rent discount.

Poor family renters spending less than 30 per cent of their income on rent also seem to a substantial extent to be benefiting from a discount for relatively long occupancy. Unlike elderly ineligible renters, however, one aspect of their housing is very distinctly worse than that of their eligible counterparts: 16 per cent of them are severely crowded.

Most housing allowance plans help only renters. This chapter shows that poor elderly and family owner-occupiers have a substantially higher incidence of missing basic facilities than their renting counterparts. This is associated with the large proportion of poor owner-occupiers who live in small towns and cities and in rural areas. Otherwise the housing conditions of these poor owner-occupiers are not much different from those of their renting counterparts, except of course with respect to security of tenure. It is quite remarkable to note that poor family owner-occupiers have a severe crowding rate very much like that of their renting counterparts, and most (in the urbanized core of CMAs, at least) have an affordability problem.

Few low-income housing programs are targeted to households other than families and the elderly. This chapter shows that both renter and

owner-occupier households among this unserved group are almost universally uncrowded and at the same time have a very high incidence of affordability problems. Reflecting probably differences in the mean age of household heads and the location of their housing, 'other' owner-occupiers, like elderly owner-occupiers, have a substantial incidence of missing basic facilities but a low incidence of poor maintenance, and 'other' renters are in the reverse situation.

NOTES

- 1 Canada Mortgage and Housing Corporation, Survey of Housing Units, 1974.
- 2 *Prima facie*, the level of dissatisfaction is an attractive criterion because it relates housing conditions directly to utility. However, if households are utility-maximizing and in equilibrium their marginal dissatisfaction relative to price will be the same for all characteristics. Put another way, if a household expresses much more dissatisfaction with its level of, say, housing maintenance than with its bathroom facilities, there is a question begging to be asked: 'Why do you have such good bathroom facilities and such poor maintenance?' There are some rational answers to this question. The household may be in disequilibrium because of imperfect information and adjustment costs: when the decision was made to occupy the dwelling, the sagging roof may not have been noticed. Or the disequilibrium may arise because of changes in family size coupled with a reluctance to move because of transactions costs. A somewhat different explanation has to do with the intertwining of consumption and investment in housing. A household may purchase a rundown house and then repair and renovate it while living in it, expressing intense dissatisfaction until the investment process is complete. These very different sources of disequilibrium in housing consumption make it difficult to interpret differences in levels of dissatisfaction, and so it is used here merely as a subsidiary guide.
- 3 This uncomplicated combination of major and minor defects did about as well on the association-with-income criterion as did complicated specifications including one similar to that in Stevens (1979). It is worth noting that this indicator says more about the asset characteristics of a dwelling than about the housing services currently yielded by the dwelling. A more appropriate indicator is not available. A list of some of the functional indicators available for the United States but not for Canada illuminates this point: roof has leakage; large holes in the floor; toilet breakdown in last 90 days; basement has leakage; evidence of mice or rats (Struyk, 1976).
- 4 Stevens (1979) found that the number of rooms was not associated with the household's dissatisfaction.
- 5 The 'crowded bedrooms' indicator defined in Table 1 takes the crowded bedrooms indicator in Stevens (1979) as its starting point. Stevens defines crowding as occurring when significantly more than 15 per cent of households of a given size are dissatisfied. The resulting relation between size of household and number of bedrooms is implausibly kinky: a four-person household is defined as uncrowded if there are three bedrooms or more, but so is a five-person and six-person household; and a seven-person household is defined as uncrowded not if it has at least four bedrooms but only if it has at least five bedrooms. This kinkiness is perhaps due to the fact that Stevens did not control for income.
- 6 The lowest ratio was 0.17 in Quebec (Steele, 1979, p. 176). The mean ratio for Canadian renters, urban and rural, in 1971 is 0.18 (ibid), while the mean ratio for a sample of Canadian renters in 1938 is also 0.18 (Greenway, 1939, p. 170). In view of

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the widespread use of the 25 per cent rule in the United States (Lane, 1977), it is of interest that the mean ratio for renters is substantially higher there than in Canada: 0.25 in 1970 in the United States (Feins and White, 1977, p. 134) as compared to 0.18 in 1971 in Canada.

- 7 The low-income cut-offs are designed for economic families and vary according to the size of the family. They were estimated using Family Expenditure Survey data. They are used in this study for households, not families. One important difference between economic families and households relates to unattached individuals, many of whom are classified as separate economic families but not separate households.
- 8 For instance, for 1978 for a four-person family they are, respectively, \$14,450 (SPCMT, 1978), \$10,654 for areas of 500,000 or more (Statistics Canada, 1980), and \$6,264 (Montreal Diet Dispensary figures as given in Ontario Ministry of Housing Task Force on Housing Need, 1978).
- 9 Further, 23 per cent had ratios over 60 per cent. The districts used here are, precisely, Capital Regional District and Greater Vancouver District; 84 per cent of recipients are singles (British Columbia Ministry of Municipal Affairs and Housing, 1978?). In interpreting these findings it is important to remember that the program requires a minimum ratio of 30 per cent.
- 10 This point is largely accepted in the important US policy document by Birch et al (1973); they define households as having an affordability problem if the ratio is greater than 35 per cent for single-person households and 25 per cent for larger households, except that the threshold is 35 per cent for elderly couples. Some discrimination on the basis of household size is also used in the Manitoba housing allowance program. The ratio for single and two-person elderly households is higher than that for families.
- 11 For a discussion of negative externalities see Canada, Task Force on CMHC (1979, pp. 20 ff). Like most such discussions it relates most directly to the physical condition of the dwelling, not to characteristics of the occupants and neighbourhood.
- 12 The list of reasons is: change in household, less space, more space, better neighbourhood, better quality, less expensive, equity, closer to transportation, work, job, transfer, own, rent, other (CMHC, Survey of Housing Units, 1974, Phase 22, file 19).
- 13 'Low-income' and 'poor' refer to households below the poverty line. 'Low-middle' income refers to households between the poverty line and twice the poverty line. 'Upper' income refers to households above twice the poverty line. The Ontario distribution among these three groups (for unsubsidized renters only) in 1976 was 20.0, 33.5, and 46.4 per cent respectively.
- 14 A description of the data sources is given in Appendix B. In Appendix C are all-Canada tables.
- 15 While about 10 per cent of all unsubsidized low-income households in Ontario live in rural areas, only about 1 per cent of low-income elderly renters do (computed from 1976 Household Income, Facilities and Equipment [HIFE] tape). The contrast between rural and urban areas is shown in Table C1.
- 16 This is also true for the United States. Ray Struyk includes no crowding measure whatsoever in his paper on the housing of the elderly on precisely these grounds (Struyk, 1976).
- 17 A caution is worth noting on the issue of security of tenure. While the indications are that forced moves are very infrequent among the low-income elderly, it may be that the disutility of a forced move is relatively so great for the elderly that insecurity of tenure or, more precisely, the risk of a forced move is a problem of importance, despite its apparent low probability.
- 18 Presumably, few of these landlords were offered elderly tenants by the housing authority. A landlord with many vacancies would probably find virtually any Rent

Supplement tenant attractive unless the landlord had substantial financial strength. Financial strength would allow more attention to be paid to long-run effects. These are regarded as of some importance: 40 per cent of Rent Supplement landlords believed that the presence of Rent Supplement tenants in their building had damaged the 'reputation of their building.'

- 19 This is the major reason given by 40 per cent as compared with 6 per cent giving the reason 'no vacancy problems' (Ruston et al, 1979, p. 12). At the same time the vacancy rates for landlords cancelling Rent Supplement as compared with those not cancelling (ibid, 1979) strongly support the view that a low vacancy rate was the critical factor. Perhaps the best interpretation is that a low current vacancy rate would not have led to cancellation if the Rent Supplement tenants had not been a problem. If Rent Supplement tenants were not a problem because of the direct costs such as vandalism and the indirect cost of increasing the vacancy rate or reducing the market rent of non-Rent Supplement units, then Rent Supplement units would be very desirable because of their virtually certain 100 per cent occupancy.
- 20 A critically important factor is OAS and GIS payments. They set an income floor for virtually all elderly households that is not far below the poverty line. The higher the income, of course, the lower the rent-to-income ratio, other things being equal.
- 21 In Manitoba a third group is eligible for the housing allowance, namely people aged 55 to 64 with pension income equal to 50 per cent or more of total income (Manitoba Housing and Renewal Corporation, SAFER brochure, 1981). Details on family housing allowances are given in Manitoba Housing and Renewal Corporation SAFER brochure, 1981, and Manitoba Regulation 80 (being a regulation under the Housing and Renewal Corporation Act respecting the making of grants and advances by the Manitoba Housing and Renewal Corporation to provide shelter allowances for family renters).
- 22 In view of the small number of observations for Ontario, it is worth noting that this pattern is confirmed in the evidence for Canada as a whole (Table C4).
- 23 Housing in poor repair may, of course, also be dangerous - if, for instance, there is danger of the sagging walls collapsing - and uncomfortable - if, for instance, a sagging roof also leaks.
- 24 In Ontario all municipalities have been required since 1975 to use the Ontario Building Code. Prior to that most municipalities were covered by some building code, as evidenced by the large number of municipalities submitting information on building permits to Statistics Canada in the 1950s. It is likely that codes were much better enforced for new buildings than for additions.
- 25 Unlike the situation with building codes, not all municipalities have maintenance by-laws. The minimum housing standards by-law for Toronto is given in SPCMT (1981, pp. 52-4).
- 26 In the city of Guelph it is policy to enforce the building code, zoning by-law, and all other by-laws only on complaint (*Daily Mercury*, 19 September 1981, p. 13).
- 27 While little confidence can be placed in the estimate for Ontario rural renters because of the very small sample size, the fact that the Canadian estimates (Table C4) also show a high incidence of crowding in rural areas suggests that rural crowding is a major phenomenon. For the United States, Goedert and Goodman show that the incidence of crowding among poor families is also greater in rural areas than in urban areas (1977, Tables 1 and 2).
- 28 This pattern is evident also in the data of Stevens (1979), despite his use of a more complex crowding indicator.
- 29 A major problem for this discussion is the lack of any housing expenditure data in HIFE. These data are available in SHU, but SHU covers only the urbanized core of CMAs, and most low-income owners live elsewhere.
- 30 This is the assumption used by CMHC's owner's expense variable 'actual shelter cost' generated in its SHU file.

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- 31 Capital gains experienced in the 1972-4 period in Ontario for most owner-occupied buildings would have made economic cost in those years negative.
- 32 In particular, in the urbanized core of CMAs 74 per cent of elderly owners below the poverty line had housing expense greater than 30 per cent of income; the incidence among elderly renters, however, was 90 per cent (computed from SHU, 1974).
- 33 Strictly, these reasons belong not under 'other' but rather under 'change in household membership,' but it seems probable that respondents erred in their replies.

3

Program design and effects on household behaviour: theory

I INTRODUCTION

The first step in assessing a housing allowance program must be to gain an understanding of its nature and possible effects. Thus this chapter discusses some theory of the effects of an income-conditioned percentage-of-rent (ICPOR) housing allowance on household behaviour. Section II sets the context by examining the two major housing allowance plans used in the Experimental Housing Allowance Program (EHAP) in the United States. These are simple plans, and in important respects ICPOR combines them. A major respect in which the most widely used EHAP plan and ICPOR differ, however, is in the qualification requirement they impose on recipients. EHAP's plan requires recipients to live in housing that passes minimum standards but in essence has no minimum rent requirement, while the standard ICPOR imposes no housing standards but does require that recipients spend a set percentage of their income on rent. Beneficiaries of public housing, it is to be noted, are subject to both requirements. In section III, the ICPOR allowance is examined. The critical role of threshold rent in setting limits to the price subsidy in ICPOR and to the incomes of beneficiaries is noted. The rationale for varying the contribution rate by household size is put forward.

Section IV discusses various incentives in ICPOR: to increase housing consumption; to make fraudulent rent claims; to split households; to share with ineligible; to search inefficiently for housing; to change location; to change tenure. Arguments are put forward for expecting the first of these to be weak, despite the very large marginal price subsidy in ICPOR. The discussion of location change focuses on the effect of varying threshold rent by location. The discussion of household splitting focuses on the effects of varying contribution rates and

threshold rents by household size and on the effects of plan regulations. Tenure change is related to the issue of including owner-occupiers in the plan.

The chapter closes with a summary, section V.

II EHAP PLANS

The ICPOR housing allowance formula is in many respects a combination of two formulas used in the EHAP in the United States. These are analytically much more tractable than ICPOR, partly perhaps because tractability may have been a major criterion for EHAP plans. The simplicity of these designs makes it useful to discuss them first.

The housing gap plan

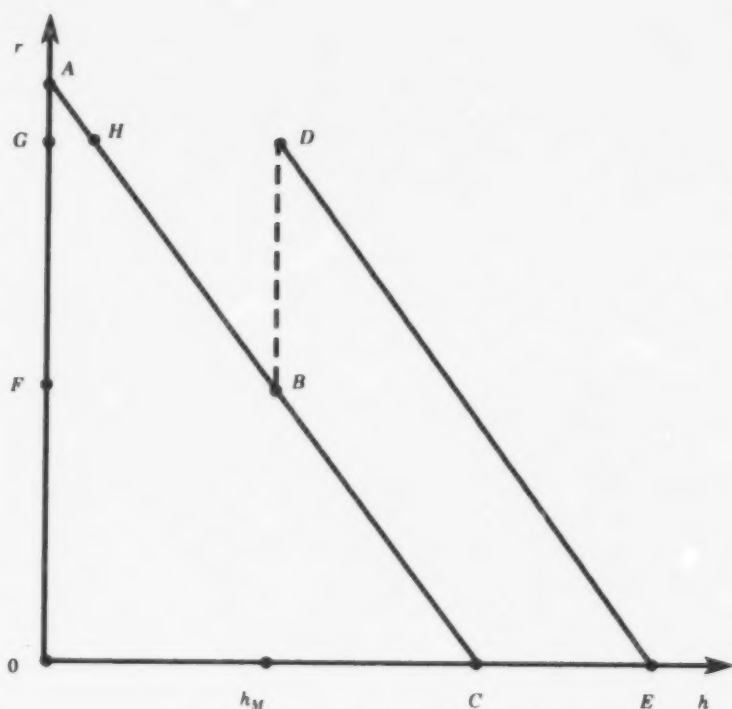
The 'design center' plan in EHAP is the housing gap plan, referred to here as GAP. Payment under this plan is given by

$$A = R^* - bY; h_c \geq h_M \text{ and } P_H h_c \geq A, \quad (1)$$

where R^* is the estimated market rent of a standard dwelling unit in a modest neighbourhood (and varies with household size because the number of bedrooms required is assumed to vary by household size), b is a program parameter (taken as 0.25 in the design-centre plan), Y is income, h_c is the quantity of housing services consumed, P_H is the price of a unit of housing service,¹ and h_M is the minimum amount of housing services in a unit that passes EHAP minimum standards (Carlson and Heinberg, 1978, pp. 59ff).

The effect of this housing allowance on the budget constraint of an eligible household is shown in Figure 1. On the horizontal axis is h , the quantity of housing service. On the vertical axis is r , the income left over to purchase all other goods. It is assumed that the consumer spends all his income purchasing housing and other goods. His initial budget line is given by ABC , indicating that if all income were spent on housing so that left-over income is zero, OC units of housing would be purchased. $ABDE$ is the budget line after the implementation of the housing gap plan.² The new budget line follows the pre-GAP budget line until the consumer purchases h_M units of housing, which requires him to spend FA on housing with OF income left over for other goods. Once he qualifies for GAP by spending FA or more, he receives the subsidy indicated by FG and the amount he has to spend

FIGURE 1



on other goods is OG or less. The consumer must spend at least FA on housing to qualify for GAP because it is assumed h_M is the minimum quantity of housing that would meet the EHAP minimum standards criterion. The housing allowance payment would purchase only HD of housing, so that the consumer in effect uses GA of his own funds to purchase the minimum quantity h_M . Notice that for consumers who would purchase at least h_M housing without GAP, the GAP housing allowance is nothing more or less than a pure income supplement – a cash grant conditional only on income. Thus, along the stretch DE , the amount of income the consumer must give up to purchase an additional unit of housing is precisely the same as it was before GAP.

Notice also that for a rational consumer with zero moving costs the budget line is *AHDE* after GAP, not *ABDE*, because the bundle indicated by point *D* is unambiguously preferred to bundles on *HB*.

Figure 1 assumes that a minimum-standard dwelling unit actually rents for 50 per cent of income,³ while R^* , the program formula's estimated market rent of a just-adequate unit, is 65 per cent of the consumer's income. As can be seen from (1) with a value for b of 0.25 this implies that the GAP is 40 per cent of income⁴ so that the consumer must in effect use (net) only 10 per cent of his income for rent to qualify for GAP. These assumptions are not far from the actuality for the poorer half of recipients in EHAP (Carlson and Heinberg, 1978, Appendix B). It is worth noting that if the rent of a minimum-standard unit were only 40 per cent of this consumer's income, H and A would be coincident and the consumer would need to use (net) none of his income for rent in order to qualify for GAP. The requirement that recipients pay rent equal at least to the GAP amount means, however, that H could never be above A ; in other words, consumers accepting GAP can never spend on other goods an amount greater than their income. In this sense they cannot divert the housing allowance to the purchase of other goods.

In some respects the above analysis is misleading if there is price variation in the housing market. In particular, let FA be the average rent of a unit just meeting program standards rather than the rent of every unit just meeting standards. Then households occupying bargain units will pay little or nothing for rent after GAP while households able to obtain only premium-priced units may pay a great deal.

An important benefit of GAP, as compared with subsidized public housing, that cannot be illustrated by Figure 1 is the freedom of the recipient to choose the characteristics of his housing bundle, subject to the minimum-standards constraint. The recipient may, for instance, prefer to spend a given number of rent dollars on more space but less high maintenance than in a government-built unit. GAP allows him to do so, and other housing allowance plans allow this with even less constraint than GAP.

The percentage-of-rent plan

The percentage-of-rent housing allowance plan is the polar opposite of the GAP plan. It is a housing price subsidy, not a cash grant condi-

tioned on minimum housing standards and income. The payment under this plan in EHAP is given by

$$A = cR \text{ if } R \leq R^*, \text{ and } A = cR^* \text{ if } R > R^*, \quad (2)$$

where c varies from 0.2 to 0.6 in different EHAP treatments, R is rent paid by the household, and R^* is a program-defined maximum rent.⁵ The effect of this plan on the budget constraint of an eligible consumer is shown in Figure 2. Her initial budget line is given by ABC . After the implementation of the program the budget line is ADE . It can be seen that no portion of the new budget line is the same as the old, in contrast to the case with the GAP plan. A household receives an allowance, albeit a small one, even if it consumes very little housing service. The effective price of its housing is reduced. Another way of looking at this changed trade-off between housing and other goods is to notice that in this plan, unlike in GAP, the housing allowance payment increases continuously as the household pays more rent, over a large rent range.

III ICPOR PLANS

Combining GAP (without the minimum-standards requirement, but with a minimum contribution rate requirement) and the percentage-of-rent plan yields the income-conditioned percentage-of-rent (ICPOR) formula:

$$A = c(R - eY) \text{ if } R \leq R^*, R > eY, A \leq A^*, \text{ and}$$

$$A = c(R^* - eY) \text{ if } R > R^*, R > eY, A \leq A^*, \quad (3)$$

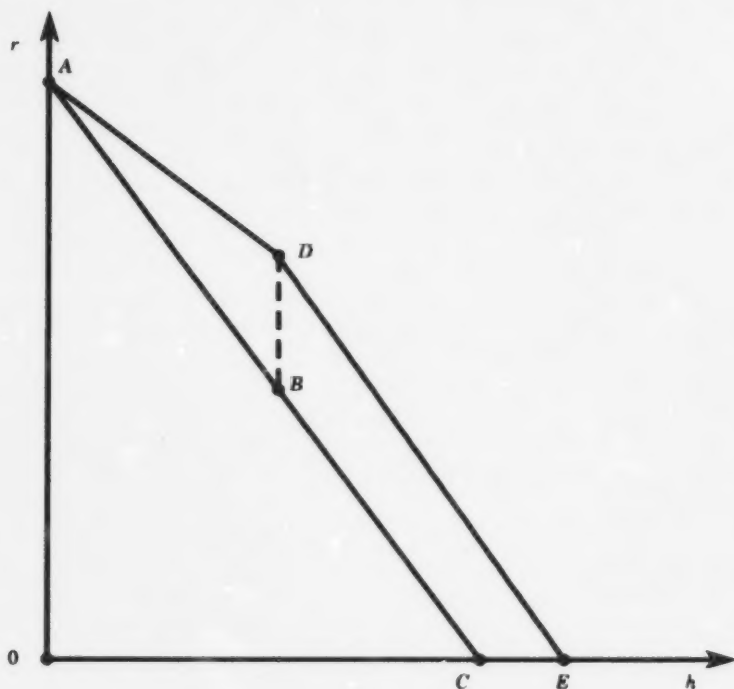
where R is rent paid by the household, Y is household income, and c , e , R^* , and A^* are program-defined parameters. Equivalently, assuming $R > eY$ and $A \leq A^*$

$$A = cR - fY \text{ if } R \leq R^*, \text{ and } A = g - fY \text{ if } R > R^*, \quad (3a)$$

where $f = ce$ and $g = cR^*$. In the case of the British Columbia program for singles,⁶

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FIGURE 2



$$A = 0.75(r - 0.30Y) = 0.75R - 0.225Y \text{ if } R \leq \$265, \text{ and}$$

$$A = 0.75(265 - 0.30Y) = 198.75 - 0.225Y \text{ if } R \geq \$265. \quad (4)$$

It can be seen immediately that for households paying rent greater than R^* , the threshold rent, ICPOR is very much like GAP. In this case ICPOR is an income-conditioned cash grant, just as GAP is for households occupying minimum-standard or better housing. Indeed, in some versions of GAP in EHAP the minimum-standards requirement is replaced by a minimum rent requirement, making the correspondence between the two plans even closer. Notice that the value

of R^* and the contribution rate together determine the maximum income of recipients. This income is called here the threshold income and is given by R^*/e . For example, from (4) it is \$883 per month for BC singles. For households paying less than R^* , ICPOR may be characterized as an income-conditioned price subsidy.

The effect of ICPOR on the budget constraint of the household is shown more formally in Figure 3. The household's initial budget line is ABC . After the implementation of ICPOR it is $ABDE$. This budget line follows the pre-ICPOR line from A to B , at which point the household has reached a level of housing expenditure equal to 30 per cent of its income, assuming parameters like those in British Columbia. From B to D an additional unit of housing costs the household only 25 per cent of its market price. Then from D to E the household once more pays the market price for additional units of housing and the ICPOR is nothing more or less than an income supplement.

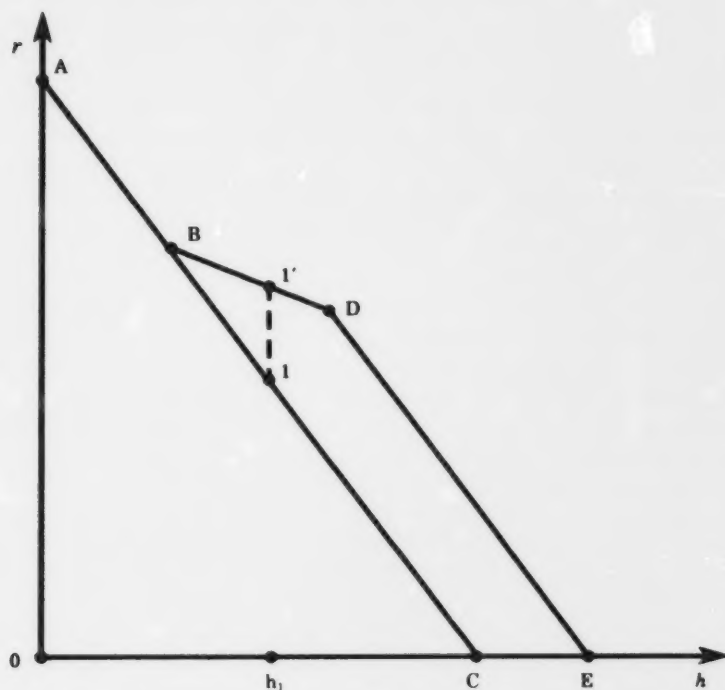
Like Figure 1, Figure 3 assumes that R^* is 65 per cent of the household's income.⁷ This implies that a household consuming the housing service indicated by point D (and so paying precisely R^* in rent) receives a housing allowance equal to 26.25 per cent of income so that it must spend 38.75 per cent of income on housing to get the maximum ICPOR. This proportion of income is high by most affordability standards (see chapter 2), and if the threshold rent in an ICPOR with BC parameters is no more than the rent of a just-adequate unit in the GAP plan, it can be seen that the ICPOR is far less generous than GAP.

ICPOR compared to EHAP plans

Depending on the values taken by ICPOR parameters, it can be quite similar to either the GAP plan or the percentage-of-rent plan. Specifically, if the contribution rate in ICPOR is zero, ICPOR is merely a percentage-of-rent plan. At the other end of the spectrum, the lower R^* and the higher the percentage of gap, the more ICPOR is like a housing gap plan.

These points may be illustrated by using Figure 3. If the contribution rate is zero, so that ICPOR is merely a percentage-of-rent-plan, line segment BD shifts up until B is coincident with A . In this case the household gets the price subsidy not just at the margin – i.e. not just on units of housing additional to the quantity costing (in the BC plan) 30 per cent of income – but on all units of housing up to the maximum obtainable by paying R^* . The lower the contribution rate the closer B

FIGURE 3



is to A and the closer the average price subsidy is to the marginal price subsidy.

However, once the percentage of gap reaches 100, BD is horizontal and the cost to the recipient of marginal units of housing up to a rent of R^* is zero, so that the ICPOR is very similar to GAP. It is important to notice the difference in the qualification requirement, however. In the ICPOR it is expenditure of (in the BC plan) 30 per cent of income on rent, while in GAP it is occupancy of a minimum-standard dwelling unit. It is clear that the GAP qualification is invariant to income. If a minimum-standard unit rents for, on average, \$200 per month, the very poorest recipient must on average pay this just as the richest must, in order to qualify. Thus in GAP the very poorest are the most

likely to have to move house in order to qualify. In contrast, in the ICPOR the minimum outlay varies with income: 30 per cent of \$500 is \$150 but 30 per cent of \$200 is a mere \$60. Thus in ICPOR it is much less likely that a very-low-income household will have to move in order to qualify.

If R^* is very low in the ICPOR plan, so that virtually all recipients are paying rent greater than R^* , BD in Figure 3 is short and for virtually all recipients ICPOR is merely a cash grant just as GAP is for all recipients who initially occupy a dwelling of adequate standards. Thus in New Brunswick, where two-thirds of recipients pay a rent greater than R^* , the ICPOR is more like a pure income supplement than in Manitoba, where a much smaller proportion do (Table 19, below).

Variable parameters in an ICPOR

A rationale for an ICPOR is assistance for low-income households that have an affordability problem. More specifically, it helps ensure that low-income households do not have to use, for housing, funds required for other necessities. This rationale implies that the contribution rate parameter in an ICPOR should vary by household size because required income net of housing expenditure is greater the greater is household size: a larger household needs to spend more on food, clothing, and other goods than a smaller household in order to achieve the same level of utility per person. The contribution rates suggested in chapter 2 are 40 per cent for a one-person household, 30 per cent for two, 25 per cent for three, 22.5 per cent for four, and 20 per cent for five or more. Assuming that the threshold rents are also larger for larger households, this implies that the price-subsidized rent range is greatly increased at a given income level the greater is household size. Further, for households paying more than the threshold rent, the ICPOR can in these circumstances be characterized as an income maintenance scheme in which the support level (the percentage of gap times threshold rent) is greater and the negative income tax rate less, the greater is household size. For example, assuming the percentage of gap is 75, the tax rate would be 30 per cent for one person and only 15 per cent for five. All Canadian housing allowance plans vary threshold rent by household size. None, except Manitoba's to a modest extent (see Appendix D), varies contribution rates by family size.

ICPOR parameters might also vary with income. Increasing contribution rates as income rises would in effect yield a progressive

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structure of negative tax rates, instead of the flat tax rate in the standard plan. This has the same kind of basis as variation in tax rates according to household size. It is probably in practice less important than the latter, however, because of existing income security programs such as Old Age Security and the Guaranteed Income Supplement, which reduce the income variation among low-income households. Manitoba and New Brunswick both have contribution rates varying with income (see Appendix D).

IV INCENTIVES IN ICPOR

It is important to know the incentives implicit in the ICPOR housing allowance. The strength of incentives for households to change their behaviour will determine the allowance's efficiency effects. The incentives implicit in the marginal price subsidy of housing service are considered here.

The incentive to increase housing consumption

In British Columbia's allowance there is a 75 per cent price subsidy (in general in an ICPOR allowance, 100c per cent [$100 \times c$ in equation (3)]) for increments in housing between that obtained by 30 per cent of income and by R^* . For every dollar a recipient spends on increased housing in this range, he receives \$0.75 back in subsidy. The incentive to increase housing consumption is apparently enormous.

In fact, the incentive is much less than it first appears. One reason has to do with the shortness of the price-subsidized range. If the threshold rent is very low the range will be very short. It will also be short for households with income close to the break-even level, as will be typically the case for categories of recipients such as the elderly, who are also beneficiaries of more general income supplements.⁸

A factor weakening the incentive is the existence of variation in housing prices. A household will lose its long-tenure discount if it moves, and such discounts have been shown to be substantial (Kain and Quigley, 1975). Additionally, a household may currently be occupying a bargain and may not be able to secure another one.

An ICPOR may also induce little response because current consumption is greater than optimum. This may occur because of the limit on housing choice caused by building by-laws and housing standards regulations. In terms of Figure 3, the household may be consuming at point 1 before ICPOR, even though this is not the most

preferred point on its budget line, because an apartment yielding a quantity of housing less than h_1 does not exist. After the implementation of ICPOR, optimal housing consumption may increase, but this increase may still leave the most preferred point to the left of h_1 . In this case the effect on actual housing consumption would be nil. The household may just move to point 1' from point 1. ICPOR would just reduce the extent to which housing consumption is greater than optimal. The high incidence in rural areas, where regulations are lax, of physically deficient housing (see Table C1) that would not be permitted in urban areas suggests that forced over-consumption of high housing quality is of some importance. Bendick, Jr, and Zais (1978, pp. 6, 14) suggest that such overhousing played an important role in reducing the impact of EHAP allowances.

Current housing consumption may also be greater than optimum because of changes in the characteristics of the household that have occurred since it first moved to its current accommodation. For instance, the household may be consuming a greater quantity of housing than desired. It is perhaps especially likely to be consuming excess space. The amount of space desired changes when there are endogenous household membership changes (Kain and Quigley, 1975, chapter 9; David, 1962), and the desired change is apt to be large because of the inherent lumpiness of membership change. Actual consumption is apt to exceed desired consumption for years (Hanushek and Quigley, 1979) because of adjustment lags. Thus an 85-year-old widow may occupy the same two-bedroom apartment she occupied a decade earlier when her husband was still alive; a single-parent mother may occupy the same apartment that she did before her husband deserted her. A housing allowance received by such households is unlikely to increase their housing consumption.

As an offset to the especially slight effect for households with excess housing, a housing allowance might be expected to have an especially great effect on the housing consumption of households that are consuming less than their desired level. It is unlikely, however, that the incidence of under-consumers will be very great. Recipients of housing allowances qualify on the basis of current income – or current income with a short lag – below the threshold income. Recipients selected in this way will contain a disproportionately high number whose income has temporarily fallen. Many families, for instance, will be recipients only when they suffer a spell of unemployment. Thus, income-related non-optimal consumption typically will be over-

consumption, not under-consumption. There is not the same clear-cut case for the non-optimal consumption related to changes in household size typically to be over-consumption. But two important kinds of household change that would tend to reduce income and so make the household eligible for a housing allowance would also tend to result in over-consumption relative to household size. These are the death that leaves an elderly widow or widower and the desertion that leaves a single-parent family.

The incentive to make fraudulent rent claims

Because a housing allowance recipient receives 100c per cent of a marginal change in his rent, both an allowance recipient and his landlord could gain from collusion. The landlord could provide the tenant with receipts for rent larger than the amount actually paid in return for a small actual increase in rent. Yinger (1981) and Henry Aaron (reported in Downs and Bradbury, 1981) regard this as an important drawback to percentage-of-rent plans. The lack of any requirement to show that the quantity of housing has increased when a non-mover's real rent increases might make this relatively easy to accomplish.

There are impediments to collusion, however. A landlord committing such a fraud would have to keep two sets of books, would run the risk of a prison sentence, and would be liable for higher income taxes, all for a return kept small by the capping effect of R^* . Further, landlords have no way of knowing with certainty which of their tenants are allowance recipients,⁹ so that the initiative for fraud would rest largely with recipients. Recipients may be law-abiding.¹⁰ They may have too slight an acquaintance with their landlords to be sure that they would not report any offer of collusion. In any case, no evidence of collusion exists in EHAP (King, 1981), New Brunswick's ICPOR, or even in Manitoba's ICPOR, despite the 90 per cent of gap paid to some Manitoba recipients.¹¹

The incentive to split households

While a household may increase its housing consumption in response to a housing allowance by moving intact to another dwelling, it may instead split up, with the total amount of housing consumed by the original household increasing, although remnants of the original household may not move from their original dwelling. An elderly

sharer may move to her own apartment; a mother may take her children and abandon her husband; an elderly widow may leave her children and move out on her own.

The incentives for household splitting depend critically on the regulations of the housing allowance plan and on the characteristics of the household. Consider first an elderly single recipient sharing with another elderly single recipient. In British Columbia's SAFER (Shelter Allowance for Elderly Renters), the claimed rent for such a person is half the dwelling unit rent and the threshold rent is half a couple's threshold rent.¹² As a consequence, the distance from the vertical axis to *D* in Figure 3 is greatly reduced for a person who shares, implying that for many single people sharing results in disqualification (because *D* is inside *AC*) and that for all others the maximum allowance is greatly cut).

An example using BC parameters as of July 1981 will clarify this. Suppose an elderly BC widow has an income of \$5,900 and is sharing an apartment renting for \$354 per month with her elderly sister. Although her rent-to-income ratio is 36 per cent, she receives no housing allowance because she is at the threshold income for sharers. Now suppose she splits with her sister, moving into an apartment renting for \$265, the threshold rent for singles. Then she receives a housing allowance of \$88.125. The increase in privacy has cost her nothing, and in fact her housing now costs her 12.5 cents less than it did before ($\$265 - \$177 - \$88.125 = \$0.125$). As this indicates, the price subsidy for an increase in housing consumption for a sharer under these rules may easily be greater than 100 per cent. This result is crucially dependent on the low ratio (0.56) of the threshold rent of a single person sharing to that of a single person living alone or, equivalently, to the high ratio (0.90) for a single-person household relative to a couple.

Consider next the case of a deserted mother in Manitoba. Suppose that she has no income and suppose that her husband's income is \$13,500, so that the intact family is not eligible for the housing allowance. Suppose that when her husband deserts she occupies accommodation with her two children renting for \$160 per month. She is now eligible for a housing allowance of \$140 per month, and the net monthly cost (excluding moving costs) of this change in housing is only \$20 per month.¹³

A positive incentive against another kind of household splitting exists in the Manitoba program. Eligible non-elderly recipients are

confined to parents in receipt of Family Allowance for at least one dependent child less than 18 years old. The departure of a 16- or 17-year-old from the household to set up his or her own household – perhaps with the aid of social assistance, perhaps through marriage – can result in the loss of \$140 per month to the parent.¹⁴

Threshold rent and contribution rate effects

It is clear from the example of the elderly sharer considered above that the ratio of threshold rents for different-sized households has a substantial effect on the incentives for household splitting. In addition, the level of threshold rents relative to actual rents and the ratio of contribution rates for different-sized households will also have a substantial impact. In the case of the first, the less threshold rent is relative to actual rent the more likely threshold rent is to be exceeded and so the more likely will differences between threshold rents for different-sized households have an effect on the actual allowance payment. To see the nature of the effect of the second factor, consider the VCR plan put forward earlier in this chapter. Under this, if two elderly widows share they must spend 30 per cent of their income on rent to be eligible for a housing allowance, but if they split they must spend 40 per cent. Under the constant contribution rate (CCR) plan, the qualifying contribution rate does not change when there is a split.

The effect of threshold rent values and contribution rates is shown for some specific assumptions in Table 9. For case I(a) (where the threshold rent is sufficiently high that it is not a constraint), under the 30 per cent contribution rate, a sharer must spend an additional amount for housing equal to 7.5 per cent of the rent of a standard two-person unit to gain the privacy of her own unit; but for case I(b), where the threshold rent is lower, the additional expenditure for privacy is lower.¹⁵ Where the housing allowance is a VCR plan, the cost of privacy is far greater because it depends on income. For an income of \$5,900 per year, for example, with a two-person actual rent of \$328 and threshold rent of \$295.20, the cost of privacy is four times as great in a VCR plan as in a plan with a constant contribution rate.

Sharing with ineligible

It seems likely, especially in light of Watts and Skidmore (1981) and the estimated effects discussed in Steele (1979), that the group most affected by household splitting incentives are young single adults. If

TABLE 9

Net rent and housing allowance for elderly individuals living alone and sharing

Cases	Case I	Case II
	Contribution rate: 30 per cent	Contribution rate: 40 per cent for 1-person household, 30 per cent for 2-person household
(a) $R_{A2} < R^*_{A2}, R_{A1} < R^*_{A1}$		
Net rent after household split (1)	$0.225Y + 0.2R_{A2}$	$0.3Y + 0.2R_{A2}$
Net rent before split (2)	$0.225Y + 0.125R_{A2}$	$0.225Y + 0.125R_{A2}$
Difference in net rent (1) - (2)	$0.075R_{A2}$	$0.075Y + 0.075R_{A2}$
Difference in housing allowance	$0.225R_{A2}$	$0.225R_{A2} - 0.075Y$
(b) $0.9R_{A2} = R^*_{A2}, R_{A1} < R^*_{A1}$		
Net rent after household split (1)	$0.225Y + 0.2R_{A2}$	$0.3Y + 0.2R_{A2}$
Net rent before split (2)	$0.225Y + 0.1625R_{A2}$	$0.225Y + 0.1625R_{A2}$
Difference in net rent (1) - (2)	$0.0375R_{A2}$	$0.075Y + 0.0375R_{A2}$
Difference in housing allowance	$0.2625R_{A2}$	$0.2625R_{A2} - 0.075Y$

NOTES: Net rent is individual's share of rent minus housing allowance. Gross rent for each sharer is $0.5R_{A2}$. Housing allowance is ICPOR as given by equation (3) with $c = 0.75$. R_{A1} is unit rent for 1-person household. It is assumed that $R_{A1} = 0.8R_{A2}$. $R^*_{A1} = R^*_{A2}$ for 1-person household. Y = income.

these are covered by the housing allowance program, the discussion above applies. But no Canadian housing allowance plan covers them, and they are not eligible for housing with rent geared to income, and so it is likely they will not be covered in any new housing allowance plan. How should sharing arrangements with them be treated in housing allowance regulations? Regulations could ignore them, could take them into account by reducing the rent that eligibles sharing with them may claim, or could take them into account by increasing the deemed income of sharing eligibles. If the second option is taken and the non-eligible is treated like a sharer,¹⁶ then the analysis above, for two eligibles sharing, holds, except that the incentive for splitting is lessened by the fact that the subsidy for increased privacy applies only in the case of one of the sharers.

Alternatively, the third option may be taken and the income of the eligible increased by some amount taken to represent the contribution of the non-eligible persons. This is done for recipients of the family housing allowance (SAFFR - or Shelter Allowance for Family

Renters) in Manitoba. Specifically, the presence in the unit of a close relative over age 18 who receives income or of any non-related roomer or boarder adds \$75 per month to the deemed income of the recipient.¹⁷ This would reduce the housing allowance for a recipient at the high end of the income scale by \$15.47 ($= 0.75 \times 0.275 \times 75$) per month. It can be seen that this is much more generous treatment than in the case of two elderly SAFER sharers. Indeed, if a SAFFR recipient can move to an apartment renting for \$50 more per month and take in a roomer who is charged \$50 per month, she will make a net gain of \$22.03 ($= 0.75 \times 50 - 15.47$). Thus in SAFFR there is a substantial incentive to *increase* household size, i.e. an incentive to reduce household splitting. The profit-making enterprise of a SAFFR recipient taking in roomers, it must be noted, is greatly constrained by the existence of a threshold rent.

A middle ground between dividing unit rent *pro rata* and the SAFFR procedure would be to reduce claimable rent for a SAFFR recipient with roomers by the estimated effect on rent of an additional room (except where rent net of this amount is above threshold rent, in which case the SAFFR procedure could be used). This would mean that the housing allowance would contain neither incentives nor disincentives for sharing with ineligible.

It may be noted that for the single-parent mother, the housing allowance program implies a large tax on marriage (but less of a tax than in the case of social assistance and public housing). The more generous the treatment of roomers, the less likely a roomer is to be converted into a husband (legal or acknowledged common-law). However, the less generous the treatment of roomers, the more the incentive to conceal their existence.

The incentive for inefficient search

There is strong evidence that there is substantial price imperfection in the housing market (see Appendix A). Bargains are available, and so are over-priced units. The unsubsidized rational household will conduct a housing search such that the expected search costs equal the benefit from obtaining bargain housing service. The existence of a 75 per cent or 90 per cent marginal subsidy will thus greatly reduce the incentive for a household to conduct a thorough search. This point is tempered by the fact that many bargains are obtained through good luck, personal contacts (see the supply experiment finding cited in

Leigh, 1981) – acquaintance with the landlord or previous tenants – or the ability to move in bargain months such as, perhaps, May.

The evidence from EHAP on the impact of a price subsidy on housing search is mixed. Households receiving a price subsidy in Pittsburgh reported fewer days of searching, fewer calls about housing, and fewer inspections than did control households, but for Phoenix there was 'no systematic pattern' (Hanushek and Quigley, 1981). It seems possible that Phoenix, with a fast-growing population and a relatively new housing stock, may have more homogeneous landlords and housing stock with less price variation than Pittsburgh; the rewards for search in Phoenix may be low even without a price subsidy. Further, the price subsidy in all EHAP percentage of-rent plans was much less than the 75 per cent marginal price subsidy in British Columbia and Manitoba.

The incentive to change location

Variations in rent may reflect variations in the quantity and price of housing service associated with imperfections in the market but also may reflect underlying demand and supply factors. Probably the major such factor is location. Prices vary from one urban area to another, with prices rising with the level of urbanization. Staranczak's estimates (1978) for low- and medium-quality rental units in Ontario imply that a standard unit in areas of 100,000 people or more commands a premium of 48 per cent over a unit in areas of less than 15,000.¹⁸

For fundamentally the same reason that mean prices increase with the size of an urban area, the price in any single urban area will be higher, the closer the unit is to the centre. Households that pay a higher price to live closer to the core do so because of savings in transportation costs – both out-of-pocket costs and other costs such as time. The more trips the household makes to the city core, the greater the transportation cost saving from living close. In urban models these trips are usually assumed to be trips to work (Henderson, 1977), in which case central-city locations are valuable for those in the workforce but not for those out of it. To the extent that household services – shopping, entertainment, good schools, medical services, and other services – are located at the core, central locations are even more attractive. Living close to the centre will also reduce the transportation costs per mile for those who, like many of the very old,

do not own a car or are unable to drive, because of better public transportation facilities close to the core.

An ICPOR housing allowance contains an incentive to move to relatively desirable locations. For households paying the required contribution rate but less than the threshold rent, an ICPOR will subsidize 100c per cent of the price differential between, say, a small urban area and a large one, so long as that price differential is not too large. As has been pointed out earlier, however, the price-subsidized range in an ICPOR is short for many recipients, and to the extent that the subsidized range is used for upgrading location it is not available for upgrading housing service. Further, if the household is not paying the required contribution rate in the less desirable location, the average price subsidy will be less than 100c per cent. Consider an elderly BC couple with an income of \$700 per month and paying \$150 per month in rent for accommodation in a rural area. Suppose similar accommodation rents for \$295 in Vancouver. In the rural area they receive no housing allowance; a move to Vancouver generates an allowance of \$63.75, or only 44 per cent of their increased price of housing.

Not all effects of an ICPOR are in the direction of encouraging households to move to higher-priced locations. If a household is originally paying more than threshold rent, an ICPOR represents an income supplement not a price subsidy, and if the household's demand for housing with a high land-building ratio is sufficiently income-elastic, this income increase may induce it to consume a housing bundle with more land at a lower-priced location. A family receiving an ICPOR allowance, for instance, might use some of the money to move from a quite centrally located apartment to a townhouse further out.¹⁹

The effects of varying threshold rent

In the case of the ICPORs in existence in British Columbia, Manitoba, and New Brunswick, threshold rent is invariant to location. Recipients in rural British Columbia are subject to the same threshold rent as recipients in Vancouver. But if the threshold rent is supposed to represent the mean rent for the same standard of housing accommodation everywhere, it should vary by city as R^* does in the EHAP GAP plan. What would be the effect of varying threshold rent by city? One effect would be an increase in the incentive to move. For a household receiving a housing allowance in a low-priced area and paying

precisely the threshold rent, the increased rent required to live in similar accommodation in a high-priced area apparently would be subsidized 100c per cent.²⁰ An essential difference between this case and the case where there is a single threshold rent is the lack of a choice between upgrading housing service and upgrading location for recipients in low-priced areas. Thus, for instance, if the threshold rent for a couple were set at \$73 more in Toronto than in Hamilton, a Hamilton couple could move to Toronto for a net expenditure increase of \$17.50, while a move from a one-bedroom apartment to a two-bedroom apartment in Hamilton, which would increase rent by an estimated \$33, would be entirely unsubsidized.²¹

In many cases the subsidy for a rent differential attributable to a move from a lower-priced area to a higher-priced one will be less attractive than that indicated above, for the kinds of reasons discussed in the section on housing consumption and also because of differences in relative prices and availability between the two areas. For example, if a household has a strong taste for land and occupies a tiny old single-detached house in Guelph for \$250 per month, a threshold rent of \$320 in Toronto would not be very attractive if the cheapest single-detached shack there is \$450 a month.

Households also will have a weaker incentive to move if they are paying less than the required contribution rate in the original location. In this case, the first part of the location differential is unsubsidized and so the average subsidy to the location differential is less than 100c per cent. Because the price elasticity of demand for housing service is almost certainly far below 1 in absolute value,²² the fact that the price of housing service is lower in less urbanized locations means that at any given income households will be spending substantially less for housing in these places and so will be relatively likely to be spending less than the required contribution rate.

The incentive to change tenure

The housing allowances in British Columbia, Manitoba, and New Brunswick all aid only renters. They consequently provide an incentive for owner-occupiers to change tenure. The degree of the incentive varies greatly, however, according to the size of the mortgage debt against the owner-occupier's dwelling. This is the outcome of the income tax system: the imputed rent of an owner-occupied dwelling is not included in income for tax purposes, while the income from a financial asset is. Consider a poor owner-occupier selling her home to

move into rental accommodation and using the proceeds to purchase a Guaranteed Investment Certificate (GIC). Assume there is no mortgage against the dwelling. Not only may 'income' rise sufficiently to make her ineligible for even a small housing allowance, but also she may now have sufficient income to incur an income tax liability. These negatives are exacerbated if the owner-occupier is receiving the Guaranteed Income Supplement to the Old Age Security pension. It is exacerbated more, the greater the rate of inflation (see Steele, 1982), because the nominal return to financial assets, not the real return, is taxed.

The examples in Table 10 illustrate the point. These examples are for a non-married elderly owner-occupier with no explicit income except OAS, GIS, and the Ontario supplement, Guaranteed Annual Income System (GAINS), and for a renter whose only non-transfer income is the interest yield of a \$35,000 asset, assumed to be the value of the owner-occupier's property. As can be seen, the owner-occupier is better off even if the rate of inflation is zero. This is the outcome of the exclusion of the imputed rent received by an owner-occupier not only from his income for income tax purposes but also from his income for the purpose of computation of GIS and GAINS.²³ As compared with becoming a renter and receiving a housing allowance, the elderly owner-occupier is better off by \$272 per year. When there is a rate of inflation as high as that experienced a few years ago, i.e. 12 per cent, remaining an owner-occupier is dramatically more advantageous. The especially great advantage of owner-occupancy arises because the income tax system and the income security system treat nominal interest income as if it were real. Thus for the renter in Table 10 all the nominal interest income of \$5,600, when the inflation rate is 12 per cent, is taken as income. No account is taken of the fact that \$4,200 of it is merely compensation for the \$4,200 loss in real value of the \$35,000 asset, caused by inflation.

In 1980 an estimated 92.7 per cent of all elderly owner-occupiers in Canada with 1979 income less than \$8,000 were mortgage-free (Statistics Canada, 1982, Table 3.3). This fact, combined with the treatment of imputed rent for income tax and income security, turns on its head the *prima facie* tenure-incentive case against a housing allowance confined to renters. A housing allowance for elderly low-income renters does not introduce an incentive for rental occupancy: more accurately, it merely reduces the incentive for owner-occupancy

TABLE 10

Income net of tax and housing expense for low-income elderly non-married owner-occupier and renter, Ontario 1980 (dollars)

	Case I		Case II	
	Rate of inflation: 0 per cent Interest rate: 4 per cent		Rate of inflation: 12 per cent Interest rate: 16 per cent	
	Owner- occupier	Renter	Owner- occupier	Renter
<i>Income^a</i>				
OAS	2,295.36	2,295.36	2,295.36	2,295.36
GIS	2,304.36	1,604.36	2,304.36	-
GAINS	586.56	-	586.56	-
Interest ^b	-	1,400.00	-	5,600.00
Total	5,186.28	5,299.72	5,186.23	7,895.36
<i>Capital loss^c</i>	-	-	-	4,200.00
<i>Income tax^d</i>	-	-	-	157.20
<i>Housing expense</i>				
Rent ^e	-	2,772.00	-	2,772.00
Utilities, property tax, and other housing operating expense	1,500.00	-	1,500.00	-
ICPOR housing allowance ^f	-	886.56	-	302.50
Income net of capital loss, income tax, and housing expense	3,686.28	3,414.28	3,686.28	1,068.70
Difference: owner- occupier minus renter		272		2,618

- a OAS, GIS, and GAINS are monthly amounts as of July 1980 times 12.
- b Interest is computed assuming that value of owner-occupied dwelling was sold by renter for \$35,000 and used to purchase financial assets with coupon and yield rate equal to interest rate given.
- c Capital loss is the loss in real value of the financial asset, and the rate of loss is assumed to equal the rate of inflation.
- d Income tax is computed assuming the following deductions: personal exemption; age exemption; standard deduction; interest, dividends, and capital gains deduction.
- e Rent is 33rd percentile rent for one-bedroom apartment in Ontario areas of 100,000 people or more in 1980 (computed from 1980 HIFE).
- f Housing allowance is $0.75(R - 0.3Y)$ where Y is income and R is rent.

that is part of the current tax system. A housing allowance for elderly low-income renters reduces distortions in the current system.²⁴

Unlike elderly owner-occupiers, most family owner-occupiers have a mortgage.²⁵ Those with a high-ratio mortgage will have a substantial incentive to become renters if the housing allowance is confined to renters. Because most low-income home owners live in small urban or rural areas,²⁶ where rental accommodation may be an unattractive alternative, the incentive for a change in tenure may be dampened, but when the tenure change does occur it will tend to involve movement into more densely settled areas.

V SUMMARY AND CONCLUSION

This chapter has presented some theory of the effects of an income-conditioned percentage-of-rent (ICPOR) housing allowance. It set the context by examining the two major allowance designs in the US Experimental Housing Allowance Program. The first of these, the 'design center' GAP allowance, requires recipients to live in housing passing minimum standards and gives them an allowance that is the difference between the estimated market rent for a modest dwelling unit and 25 per cent of their income. The second, the percentage-of-rent allowance, is a price subsidy paying a set percentage of the recipient's rent.

The ICPOR is essentially a combination of GAP (with the housing standards requirement replaced by a minimum contribution rate requirement) and a percentage-of-rent plan. The payment is a percentage of the amount by which rent exceeds a given percentage of income, for households paying up to a set threshold rent. For British Columbia, for example, the payment is 75 per cent of the excess of rent over 30 per cent of income. For those paying more than threshold rent the payment is based on threshold rent rather than actual rent. It can be seen that in ICPOR there is a 75 per cent price subsidy on increments of housing service greater than that purchased by 30 per cent of income (using BC parameter values) up to the amount purchased by threshold rent. As the contribution rate falls below 30 per cent, the ICPOR becomes more like a simple percentage-of-rent allowance.

The threshold rent, R^* , plays a critical role in the ICPOR. It sets a limit on the price subsidy. Further, for households paying rent greater than R^* , the ICPOR is, in effect, an income-conditioned cash grant, and so the lower R^* , the more an ICPOR is like a standard income supplement. Lowering R^* , in an ICPOR, in this respect, is like

lowering housing standards in the EHAP GAP plan. Because the income limit for recipients is given by the threshold rent divided by the contribution rate, lowering R^* also lowers the income limit. Thus R^* is a powerful parameter in its effect on the progressiveness of an ICPOR.

An ICPOR may have parameters that vary according to the characteristics of the household. One attractive possibility is a contribution rate falling as household size increases. This makes sense if an ICPOR is being used to ensure that low-income households will have sufficient income to pay for food and other needs, after they have paid their rent. Larger households, after all, need more money for these needs than do smaller households, if they are to attain the same level of utility. Another attractive possibility is lowering the contribution rate as income falls. This may be equivalently expressed, for households paying more than R^* , as making the negative income tax progressive. This would probably make less difference to the equity of the ICPOR than variation according to household size, because the variation of incomes among low-income households is probably less great than the variation in household size.

An ICPOR contains incentives that affect its efficiency. The first is an apparently great incentive to increase housing consumption because of its large marginal housing price subsidy. The incentive is, however, dampened by a number of factors. One is the shortness of the price-subsidized range. Another is the substantial price variation in the rental housing market: the length-of-tenure discount, by itself, implies that on average a mover will not get an increase in housing service proportionate to the increase in rent. Other factors dampening the incentive are the high probability that housing consumption originally is greater than optimal, and the size of moving costs.

An ICPOR also contains incentives for fraud, but in most cases landlords have no way of knowing with certainty which tenants are ICPOR recipients. There is also an incentive for inefficient housing search, but housing bargains are typically obtained by luck and personal contacts rather than costly search procedures.

One way a household can increase housing consumption is to split, and an ICPOR provides an incentive for this as it does for other ways of increasing housing consumption. The strength of the incentive depends critically on the ICPOR parameters and regulations. For one likely type of case in British Columbia there is a greater-than-100 per cent subsidy for expenditure on privacy. In general, the incentive for

eligibles to split will be greater, the higher the R^* and the higher the ratio of R^* for smaller-sized households to that for larger ones. A major reduction in the incentive to split would be accomplished by lowering the contribution rate for larger households. The regulations for sharing with ineligibles are apt to be particularly important for a family housing allowance scheme. A generous treatment of a roomer will discourage splitting but may encourage fraud in the acknowledgment of common-law relationships.

An ICPOR will tend to encourage changes in location to higher-priced areas, with this incentive being lower if R^* is not varied by urban area. The incentive will be dampened by the same factors that dampen the incentive for increasing housing consumption. In addition, moves from rural to urban areas will be discouraged by the higher relative prices of single-detached and other types of land-intensive housing in urban areas. Further, a relatively high proportion of those living in rural areas will be paying below the minimum contribution rate for their housing to start with, thereby reducing the effective subsidy for a change.

If the ICPOR is paid only to renters it contains an incentive for low-income owner-occupiers to change tenure. The importance of this incentive depends on the relative size of the owner's mortgage, because of the exclusion of imputed rent from income in both the income tax system and the income security system. It is shown here that an elderly owner-occupier in Ontario with no mortgage and no income but transfer payments (including the Guaranteed Income Supplement) would not find it advantageous to sell and become a renter even if there were a housing allowance confined to renters. Further, the disadvantages of changing tenure are greater, the greater the rate of inflation. Because the overwhelming majority of elderly owner-occupiers do not have a mortgage, excluding them from a housing allowance scheme would thus be attractive on grounds of efficiency and equity. Because most low-income family owner-occupiers do have a mortgage, excluding them from a housing allowance scheme does not have the same rationale. Indeed there are good grounds for including them.

NOTES

- 1 A unit of housing service and the price of a unit of housing service are defined implicitly by the identity that rent equals the price times the quantity of housing service. In general an apartment will generate many units of housing service, and

the higher its quality and the larger it is, the more units of housing service it will generate.

The price of housing service is the price of an (unchanging) unit of housing service. Thus if in a given housing market at a point of time there is a single price of housing service, an apartment that rents for twice as much as any standard apartment is taken to contain twice as much housing service as the standard apartment. If in a second housing market a standard apartment rents for twice as much as the standard apartment in the first market, the price of housing service there is said to be twice as high as in the first market.

- 2 Here and elsewhere in this chapter it is assumed that the implementation of a housing allowance has no effect on market prices.
- 3 In terms of the diagram, FA is one-half OA .
- 4 From equation 1, $A = R^* - bY$; thus, assuming $R^* = 0.65Y$ and $b = 0.25$, $A = 0.65Y - 0.25Y = 0.40Y$. That is, in terms of the diagram, $FG = 0.40Y$.
- 5 This is not precisely the same as the specification given in Carlson and Heinberg (1978), because neither they nor Hanushek and Quigley (1980) say that A is the amount cR^* , if $R > R^*$. They do not give the value of R^* and do not mention any maximum income condition for recipients.
- 6 These are the parameters for single-person households ('singles') as of July 1981. The parameters c and e have not changed since the inception of the program, and the are the same for single-person households as for couples.
- 7 This is not entirely unlikely. In British Columbia in March 1981, 8.4 per cent of SAFER recipients paid more than 65 per cent of income for rent, and 41.3 per cent paid over 50 per cent (data from Report S25, SAFER program statistics).
- 8 Low-income elderly persons are eligible for the federal Old Age Security and Guaranteed Income Supplement programs and in most provinces also for a supplement program stacked onto GIS.
- 9 This is the case in the BC, Manitoba, and New Brunswick plans. In contrast, in the EHAP Supply Experiment, recipients were required to have a lease, and so applicants without a lease had to obtain the co-operation of their landlord to qualify.
- 10 It is the opinion of housing administration officials that senior citizens applying for R.A.T.E. are basically a sincere and honest group' (letter from Claudia Barnett, New Brunswick Housing Corporation, 18 February 1981).
- 11 Information on the New Brunswick experience comes from Claudia Barnett; on Manitoba's, from Jim Zamprelli, Manitoba Housing and Renewal Corporation. Of course undiscovered fraud could exist.
- 12 For July 1981 the amounts for threshold rents are \$265 for a single person living alone and \$147.50 for a single person sharing. The threshold incomes implied by these amounts are respectively \$10,600 and \$5,900.
- 13 The percentage of rent for a family with no income in Manitoba's SAFFR is 90, but there is a maximum payment constraint of \$140 per month. Lest the \$160 rent appear impossibly low, it is worth noting that in June 1981 there were 33 SAFFR three-person households paying rent of \$160 or less; the threshold rent was \$295 for a family of this size.
- 14 It is of interest to compare the incentive for household splitting in the ICPOR with that in EHAP's GAP. One factor tending to make it greater in GAP is the fact that the household receives all of the affordability gap in GAP, not just part of it, as it would in an ICPOR. Thus, suppose that a two-person household before and after a split pays an actual rent equal to R^* (the threshold rent in the ICPOR or the estimated average rent of a just-adequate unit in GAP). Then the total increase in subsidy received in GAP is $2R^*_1 - R^*_2$ where R^* refers to the R^* for a household of size i , while in ICPOR it is (using BC parameters), only 75 per cent of this. Whether the resulting numbers are different depends on the values of the R^* s in the two plans.

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In fact the set of R^* s actually used in GAP suggests that it may have provided less incentive for splitting than in British Columbia or Manitoba because of its relatively small R^* for small households. The R^* for a one-person household was just 81 per cent of that for a two-person household, on average, over eight EHAP locations (Allen, Pitts, and Glatt, 1981, Table 8), as compared to an average 90 per cent for BC SAFER. The R^* in EHAP for a one-person household averages less than one-half the R^* for a family of seven, while in Manitoba the similar ratio is 0.77.

- 15 In view of this it is instructive that after some experience administering its SAFER, Manitoba changed the R^* for a unit rented by sharers to 1.5 times that for singles. Equivalently, the sharer's R^* is now 1.333 times that for a couple (information from Jim Zamprelli).
- 16 This is the regulation that applies in British Columbia's SAFER. An elderly person sharing with $(n-1)$ others would be deemed to pay $1/n$ of the unit rent unless the sharer is under 18 years old, in which case the elderly person is deemed to pay the whole unit rent. The R^* where the sharers are 18 or over is $1/n$ times the R^* for couples (information from Lenke Turje and Mike Williams, BC SAFER office). In Manitoba an elderly single or couple sharing with an income-receiving child 25 years old or over is assumed to pay one-half the unit rent, i.e. is treated as sharer (SAFER Policy Interpretation, No. 005/81, 5 May 1981).
- 17 More precisely, the greater amount - actual rent paid, or \$75 per month - is added. A relative who is earning some income but who is a dependant for tax purposes has no effect on the allowance. This treatment is apparently the same as that used for calculating rent in public housing (submission to the Board, Manitoba Housing and Renewal Corporation, 10 March 1981).
- 18 The premium is 21 per cent for a unit in areas with population of 30,000 to 99,999. The unit is a two-bedroom unit with two other rooms in a 20-49-unit building built before 1940, with heat included in rent. Parameters are given in Staranczak (1978, Table 1, p. 103). Some of the variation in rents by urbanization level is probably attributable to variation in housing quantity. Housing regulations tend to be laxer, the less densely settled the area, so that there would probably be many two-bedroom rental dwellings in rural and small urban areas too low in quality to be permitted in larger urban areas.
- 19 Muth (1969) shows that under certain assumptions a household with a higher income will live further out (in lower-priced locations) than a household with a lower income. Muth's model assumes that the cost of transportation per mile for a household increases when its income increases, because the imputed cost of time rises. In the case of a household receiving an income increase from a housing allowance, of course, there is no concomitant change in the imputed cost of time, and so Muth's prediction requires weaker assumptions here than in Muth's own model.
- 20 This is true if the threshold rent in each location equals the expenditure required, on average, to receive the same quantity of housing service in each location, and if a moving household pays a price for housing service that differs from the mean price by the same amount before and after the move.
- 21 This example assumes a 75 per cent-of-gap payment, a one-bedroom rent in Hamilton of \$193, and ratios of Toronto rent to Hamilton rent and two-bedroom Hamilton rent to one-bedroom Hamilton rent the same, respectively, as the actual ratio of Toronto one-bedroom mean rent to Hamilton one-bedroom rent and Hamilton two-bedroom rent to Hamilton one-bedroom rent as given by Ontario Ministry of Housing (1981, Table 2.1).
- 22 Estimates of the price elasticity of demand from EHAP centre at around -0.2 (Hanushak and Quigley, 1981). In view of the difference between this and standard assumptions of a few years back (e.g. Fallis, 1980), it is worth quoting Hanushak and Quigley (1981, p. 204): 'Let this not obscure the basic message of the impressive and careful analysis of price sensitivity reported in great detail and subjected to a variety

- of sensitivity tests. A decade ago, many economists assumed on the basis of practically no evidence, that the price elasticity of housing demand was about -1.0 or even more elastic. Experimental observation, suggests a much lower sensitivity, at least for low income households' (emphasis added). The standard assumption of a few years back, of course, may be true for higher-income households; the price elasticity for low-income households may be around -0.2 largely because of the minimum-bundle constraint associated with building codes and other regulations.
- 23 Social assistance to the non-elderly (Family Benefits) also ignores imputed rent.
- 24 The possibility cannot be ignored, however, that an elderly person may be sufficiently sophisticated, risk-loving, and willing to forgo cash flow to rearrange an asset portfolio so as to take advantage of the housing allowance program without giving up income tax shelter. For example, the proceeds of the sale of a home could be used to purchase a stock with no dividend income, or the home could be retained but occupied by a son and daughter-in-law paying no rent. The Manitoba survey of SAFER recipients suggests that a sizeable number of them may have taken the latter option. Of respondents, 56.3 per cent had been a 'homeowner most of your life,' and 14.2 per cent of these had not sold prior to the receipt of SAFER (Minuk and Davidson, 1981, p. 42). Support or gifts from relatives are apparently not counted as income for purposes of SAFER. (It certainly is not counted for computation of Ontario's GAINS.)
- 25 In Canada in 1980 among single-family households with single children under 18 years of age the proportion of home owners in the \$4,000 - \$7,999 income group is 39.6 per cent; in the \$8,000 - \$11,999 group, 57.5 per cent. Among home owners in the two groups 49.5 per cent and 55.7 per cent, respectively, had a mortgage. For single-parent family households with children under 18, the home ownership ratios are respectively 16.8 per cent and 36.5 per cent, and in each case the percentage with mortgage is higher than for two-parent families (Statistics Canada, 1981, Tables 4.8, 4.9).
- 26 Most of these, in turn, live in rural areas (ibid, Tables 2.1, 2.4, 2.6).

4

Household response to a housing allowance: evidence

I INTRODUCTION

In the previous chapter the theory of household response to an ICPOR housing allowance was discussed. Evidence on the strength of household response is presented in this chapter, using data from the Manitoba and BC allowance programs and, to a lesser extent, data from New Brunswick. These data are uniquely valuable because they are generated by real-world ongoing programs rather than by simulations of models built using assumed behavioural parameters. The problems associated with the administrative nature of these data are more than offset by their root in reality. Much of the Canadian analysis has used simulation evidence, but experience has shown it to be seriously misleading (see chapter 5).

The nature of household response to an allowance program is critically important for policy. A strong response would be desirable if an increase in the housing consumption of low-income households is a policy aim. If it is not, however, then a strong housing response would be undesirable for a number of reasons. One is the inefficiency involved in the distortion of household choice. Another is the consequent likelihood of rent increases that would reduce the allowance's benefit to recipients. The possibility that housing allowances will largely benefit landlords, not recipients, is a major popular objection to housing allowances, so that fundamental evidence on this point is important.

Section II of this chapter sets the context of the data, giving some basic facts about recipients in Manitoba, British Columbia, and New Brunswick. Appendix F gives the characteristics of the widely different housing markets where the allowance recipients live. Section III discusses the first housing response of importance – the participation

response. The participation rate is far from 100 per cent, and this by itself indicates a lower housing consumption response than many have predicted. For most recipients, mobility is the key to increasing housing consumption, and in IV mobility evidence is discussed. In V the housing consumption responses of movers and non-movers are examined. Household splitting is another way to increase housing consumption, and the evidence on this is examined in VI. Location change is the topic of VII. Explanations for the pervasive finding of very little response are considered in VIII, with attention being paid to the low demand elasticities recently estimated for low-income households, the cost of moving, and factors affecting the size, duration, and degree of certainty of the allowance payment. Further, it is pointed out that the nature of the evidence has not allowed an assessment of that consumption increase that may have occurred because reductions in housing consumption were prevented or reduced. The chapter closes with a summary and concluding remarks.

II THE RECIPIENTS

A general picture of the extent of the various housing allowance programs and the characteristics of the recipients is of assistance in the interpretation of the evidence on household response. As Table 11 shows, none of the programs is large, but by far the largest is that in British Columbia. In the one province extending the allowance to families as well as the elderly - Manitoba - families make up little more than a quarter of all recipients. Over time, enrolment has either remained stable or declined except where there was a substantial enrichment in the payment formula (Table G1).

As Table 11 shows, the age distribution of elderly recipients is remarkably similar over the three provinces: for 1981/2 the proportion of the very old (75 and over) is over 50 per cent. Recipients are thus much older than the 65-and-over population as a whole (see Divic, 1981, Table 6). Housing allowance elderly are also much older than those on the waiting list for public housing: for instance, the proportion over 75 on the BC waiting list in 1977 was just 41 per cent, and for Toronto it was even less.¹ This is not surprising. Given the recent origin of the Canada Pension Plan, the increase with age in the probability of being widowed and thus no longer able to enjoy the economies of scale of a two-person household, and the effect of inflation in eroding the real value of private pensions fixed years earlier in nominal terms, it seems likely that the oldest of the elderly are the

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TABLE 11

Beneficiary data, British Columbia, Manitoba, and New Brunswick

	British Columbia	New Brunswick	Manitoba	
			Elderly	Families
<i>Number</i>	11,374	1,013	3,081	1,161
<i>Incidence among beneficiaries of demographic characteristics (percentages)</i>				
65-69 years of age	16.8	17.3	20.5	-
75 years of age and over	57.6	52.4	52.3	-
25 years of age or less	-	-	-	26.6
36 years of age and over	-	-	-	29.5
Couple	8.2	n/a	8.3	-
Single	89.6	n/a	88.8	-
Sharer	2.2	n/a	2.9	-
Single-parent	-	-	-	63.2
Five-or-more-person beneficiary household	-	-	-	11.7
<i>Mean annual income (dollars)</i>				
Singles	5,866	5,688	6,309	-
Single-parent family	-	-	-	7,249
<i>Mean monthly rent (dollars)</i>				
Singles	242.94	222.27 ^a	224.18	-
Single-parent family	-	-	-	252.41
<i>Mean monthly allowance (dollars)</i>				
Singles	47.89	38.57 ^a	61.80	-
Single-parent family	-	-	-	81.12

^a Refers to all beneficiaries.

SOURCE: Table G1.

poorest. It also seems likely that for the oldest of the elderly the psychic costs and physical difficulties of a move are particularly high, so that moving to public housing is relatively unattractive.

While housing allowances for the elderly serve the very old, Manitoba's SAFFR (Shelter Allowance for Family Renters) serves not the middle-aged but the young; as can be seen from Table 11, about 70 per cent of family heads receiving SAFFR were under 35. SAFFR typi-

cally serves small single-parent families, not large intact ones; indeed, over half of all recipient families consisted of a single parent with just one or two children (SAFFR program statistics for December 1981). This is consistent with the estimate that 57 per cent of families eligible for SAFFR-type housing allowances in Canada in 1976 would have been headed by a single parent (Table I1).²

Elderly recipients are typically single-adult households, just as are family households. In New Brunswick two-thirds of the recipients are widows.³ Elsewhere there is no information about sex, but it seems safe to say that the typical elderly recipient is a very old widow living alone and the typical family recipient is a very young single-parent mother.

Unsurprisingly, in view of the importance of OAS and GIS, the average income of elderly recipients is close to \$6,000 in all three provinces, with some of the small difference that does exist attributable to provincial income supplements and differences in the parameters of the housing allowance plan. The relative generosity of the Manitoba plan and the relatively low rents in that province are reflected in the size of the mean rent burden there before SAFER (Shelter Allowance for Elderly Renters) – the rent-to-income ratio in December 1981 was 42.6 per cent – and after – it falls to 30.9 per cent. The comparable numbers for British Columbia are 7 percentage points higher. It is instructive to note that despite the great enrichment of Manitoba's plan in January 1981, mean housing consumption (mean rent divided by the rental component of the consumer price index) there apparently rose hardly at all in 1981 (see Table G1).

The average income of single-parent family recipients in Manitoba is only about 15 per cent greater than the average for the single elderly in that province.⁴ Their average rent is also larger, but by less.

III PARTICIPATION RATES

The participation rate of eligible households is an important issue for a number of reasons. It determines program cost. It affects the horizontal and vertical equity of a program. It has implications for economic efficiency.

An eligible household is defined here as a household with an income low enough and a rent high enough to qualify it for a non-zero allowance payment. Thus a household's only cost of participation is the cost of informing itself that the program exists and that it is eligible, the cost of filling out an application form, plus the possible psychic cost of

the welfare stigma. An eligible household as defined here does not have to move to meet contribution rate standards, because households paying less than 30 per cent of income on rent are defined as ineligible; and it does not have to move to a unit satisfying minimum standards.

British Columbia

Despite the apparently trivial costs of participation, the estimated participation rate for British Columbia in September 1978 was only 54 per cent.⁵ This participation rate was estimated without taking into account the Renters' Tax Credit,⁶ and it might be argued that this is inappropriate. Because SAFER payments are fully deducted in determining the RTC, for the year 1978 there would apparently be no net benefit to someone eligible for SAFER from SAFER if she had zero *taxable* income (true for almost all eligibles) and were eligible for a payment of \$12.50 per month or less. But SAFER is paid monthly, and so the SAFER payments would be received on average more than a half-year before the RTC. Thus in all cases there is a present-value advantage to electing SAFER over the RTC, and some households also may prefer the cash-flow pattern of SAFER. Further, a household at the beginning of the year does not know whether or not its landlord may increase its rent later in the year to a level that generates SAFER payments substantially greater than the RTC. In any case, the participation rate computed by eliminating from eligibles all households with a value of zero or less for SAFER minus the RTC⁷ is still quite low, at 64 per cent (Table 12).

It is important to put this in context. Hum reports that the participation rate in the Canadian Negative Income Tax (NIT) experiment as estimated for the Manitoba saturation site was only 34 per cent; and citing Marc Bendick, Jr, he notes that the average participation rate in public assistance programs in the United States is just 46 per cent (Hum, 1981, p. 34). Thus while the participation rate estimated here for BC SAFER is far below the assumption of 100 per cent used in typical cost estimates (e.g. Clayton and Associates, 1981; Canada, Treasury Board, 1979), it is high relative to participation rates in public assistance programs in general.

How does the BC rate compare with the EHAP experience? It is similar to enrolment rates in the supply experiment (57 per cent for Green Bay renters and 54 per cent for South Bend renters) (Cronin, 1981a, Table 4.1), although on a comparable data basis the BC rate would be considerably lower.⁸ It is very much lower than the rates in

TABLE 12

Estimated participation rate by benefit amount and household type, British Columbia SAFER, September 1978

	Number of recipients	Participation rate ^a	
<i>Size of SAFER monthly payment</i>			
\$20 and less	2,652	35.7	(85.1 ^b)
\$20.01 to \$50	5,391	71.0	
More than \$50	6,321	53.9	
Total	14,364	53.7	(64.0 ^b)
<i>Household type</i>			
Singles	12,214	57.3	(65.4 ^b)
Sharers plus couples ^c	2,150	39.6	(57.3 ^b)

a Recipients divided by the estimated number of households with income and rent making them eligible for a non-zero monthly payment.

b Alternative participation rates, estimated by excluding households with estimated value of zero or less for SAFER payment minus Rental Tax Credit.

c Number of sharer recipients divided by two; eligibles based on two-person households assumption.

SOURCES:

Recipients: British Columbia Ministry of Municipal Affairs and Housing (1978a).

Eligibles: Estimated using the 1976 HIFE with rents inflated to 1978 on the basis of CMHC vacancy survey rent data, with income inflated partly on the basis of 1978 HIFE and 1980 HIFE and partly on the basis of OAS and GIS changes and with number of households inflated on the basis of 1978 HIFE elderly renters. In the 1976 HIFE are 110 BC elderly renters with income less than twice the poverty line, so that the sample size is small.

the demand experiment – about 80 per cent for the housing gap plan and even more for the percentage-of-rent plan (Straszheim, 1981, Table 3). The substantial difference between the results in the supply experiment and those in the demand experiment may be the result of the difference in procedures. Demand experiment eligibles were all personally contacted and offered the opportunity to enrol, while in the supply experiment households initiated enrolment in response to media advertising and other outreach efforts. Thus the supply experiment results are the relevant results for estimating participation in an operational plan.

Disaggregation of the EHAP participation rates, however, shows that the participation experience of EHAP is not as similar to that in British Columbia as appears at first sight. In particular, the enrol-

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ment rate for EHAP elderly renters is only 39 per cent for the supply experiment sites (Cronin, 1981a, Table 4.2). One reason for the higher rate for BC elderly is the technical one of a different definition of eligibility, but another may be the receipt by most BC eligibles of the Guaranteed Income Supplement, a transfer payment not very different in style from SAFER. Results in both demand and supply experiments in EHAP show that those already in receipt of government assistance are substantially more likely to enrol in a housing allowance program than others (Cronin, 1981a, Table 4.2; Straszheim, 1981, Table 5).

Differences in outreach apparently do not explain the higher BC participation. The supply experiment plan was 'widely and continuously publicized' (Cronin, 1981a, p. 81), while BC SAFER now is largely publicized merely by brochures distributed to various provincial offices and elsewhere, although when the program was introduced in 1977 information was mailed to all Old Age Security recipients. As of early 1981, advertising and publication expense in British Columbia amounted to less than 70 cents per recipient, while direct outreach costs per recipient in the supply experiments were \$21 at Green Bay and \$37 at South Bend.⁹

Participation and payment amounts

An unexpected result of the estimation of the BC participation rate is the pattern of participation rates by size of SAFER payment. The participation rate *declines* substantially as the payment rises from less than \$50 per month to more than \$50 per month. In other words, the greater the benefit an eligible will receive, the *less* she is willing to incur the information costs, other transactions costs, and psychic costs required for participation. This is so extraordinary it bears further examination. One possibility is, of course, that the estimates of the participation rate by payment size are greatly in error. This cannot be ruled out, given the small size of the sample and the assumptions required in the estimation. Corroborating this estimated pattern, however, is a remarkable pattern in the EHAP supply experiment: a quite strong increase in participation rate with income until an income of \$4,000 is reached.¹⁰ Since the size of the housing allowance payment in the supply experiment was affected only by income, this implies a participation rate declining as benefit increases for those with incomes less than \$4,000. An obvious explanation for this pattern is the possibility that the poorer the eligible, the greater the costs

of participation: the poorest are apt to be the least educated and so the least capable of reading brochures and completing application forms. In British Columbia, in addition, as has been argued above, the poorest are also apt to be the oldest of the elderly and for that reason relatively likely to be mentally and physically disabled.

Manitoba

The participation rate in Manitoba has been estimated at only 27 per cent.¹¹ This figure is not comparable to the BC rate because the estimation apparently included as eligible those disqualified because of their low rent¹² and those eligible for a Property Tax Credit (PTC) larger than the SAFER payment (and Manitoba's Property Tax Credit is much richer than the BC Renter's Tax Credit). For elderly renters paying more than \$136 per month in rent in 1980, the PTC delivered as a lump sum for the year 1980 the equivalent of \$27 to \$44 per month minus SAFER payments received in 1980.¹³ Eliminating from eligibles those for whom the (PTC minus SAFER) is zero or less would plausibly add 20 percentage points to the participation rate. SAFER data show that this adjustment would be inappropriately extreme, because a very large number of households that are ineligible by this assumption in fact do elect to receive SAFER: 35 per cent of SAFER recipients in December 1980 received monthly payments of \$30 or less per month (SAFER Program Statistics, December 1980, Report No. S26).

Reasons for non-participation

Evidence on reasons for non-participation in Manitoba is available from a Manitoba survey of people who requested SAFER applications but did not submit them.¹⁴ As can be seen from Table 13, confusion and difficulties with the application form were far more important than the low size of the SAFER payment in stated reasons for non-participation. This is especially impressive given that the survey contacted only those capable by themselves, or with assistance, of mailing in a request for an application; those who phoned for an application but did not submit were not included in the survey. The stated reasons strongly suggest that non-participation is associated with poor education and ability and, accordingly, negatively with income. It is consistent with the fact that in EHAP demand experiments 'requirements, bother, paperwork' was a more important reason than low

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TABLE 13

Reasons for not applying for Manitoba's SAFER for those requesting application form

Reason for not applying	Percentage	Subtotals (percentage)
<i>Low benefit</i>		12.1
Offset property tax credit	7.2	
Felt benefit would have little impact	4.9	
<i>Psychic cost</i>		6.7
Not needed/pride	5.4	
Didn't want to release tax forms	1.3	
<i>Communication problems</i>		26.4
Confused with Pensioner Tenant Sales Tax Assistance program	10.3	
Incorrectly thought income too high	10.0	
"Don't want to "buy any""	1.8	
Thought SAFER was taxable	2.2	
Thought that moving was involved	1.3	
Thought that rent was limited	0.4	
Thought they were too late to apply	0.4	
<i>Application problems</i>		18.3
Not done yet	7.6	
Forms too complicated	4.5	
Never received application	3.1	
Applied and haven't heard	2.7	
Wrong application was sent out	0.4	
<i>Ineligible</i>		32.9
Income too high	20.0	
Got application for someone else	6.7	
Pension income less than 50 per cent of total income ^a	3.1	
Not renting	1.8	
Death	0.9	
Moved to public housing	0.4	

^a Source actually gives this reason as 'pension income 50% of total income.' Persons 55 to 64 as of January 1981 were eligible for SAFER if pension income was 50 per cent or more of total income.

SOURCE: Manitoba Housing and Renewal Corporation, 1981 (Table A and text of "The Penetration Survey").

benefit for households refusing enrolment, even though those offered enrolments were personally interviewed.¹⁵ Further, Zais reports that in EHAP outreach 'simple messages seemed to work best and complicated information was difficult to transmit outside of face-to-face enrolment interviews' (1981, p. 243).

It is of some interest that in New Brunswick the minimum housing standards requirements (see Appendix D) apparently has had only a tiny impact on participation,¹⁶ despite the low quality of housing there (Table F1). This may be partly because low-income elderly renters live in better housing than other low-income renters (see chapter 2) and partly because of decentralized inspection in RATE. Inspectors were provincial officials based in regional housing offices and thus familiar with local conditions and perhaps flexible in enforcing provincial standards.¹⁷ None the less, the difference between the New Brunswick experience and the EHAP experience, where the impact of standards on participation was very great, is extraordinary. The explanation may lie in the minimum contribution rate requirement which is a part of ICPOR plans but not of GAP. Specifically, most New Brunswick households in non-standard housing may have been ineligible because their rent was too low.

Participation rates of far less than 100 per cent and indications that the pattern of participation rates distinctly reduces the progressivity of a housing allowance are important drawbacks. As noted above, however, the participation rate estimated for the Manitoba NIT experiment is even lower than the BC SAFER rate, and there is no reason to suppose that the NIT pattern of participation by benefit amount is any more progressive than that for the BC SAFER. Thus participation is no more a problem for a housing allowance program of the ICPOR type than it is for other income supplement programs.

IV MOBILITY RESPONSES

A housing allowance may induce increased consumption of housing service in more than one way. A household can redecorate or perform minor repairs in response to a housing allowance. It can offer its landlord higher rent to do the same thing or to make capital improvements. But households that remain intact are unlikely to be able to increase their living space or dwelling quality very much without moving. This section and the next consider evidence on the increases in housing consumption of intact households and focus primarily on those accomplished by moving.

The increase induced by a housing allowance and achieved through moving by recipients depends on the proportion induced to move and on the induced mean change in housing consumption among movers. The first of these is examined in this section. The analysis assumes that allowance-induced mobility is the difference between the mobility of a recipient and the mobility of the same household category in the Survey of Housing Units (SHU).

Consider first the elderly. As can be seen from Table 14, low-income elderly renters have a low mobility rate – 11.2 per cent¹⁸ for those below the poverty line – and this is almost precisely the same as the estimated mobility rates for BC and Manitoba elderly recipients (Table 15).¹⁹ Thus the allowance apparently had no effect on mobility.

It might be argued that the no-effect finding for British Columbia is due to the fact that the BC data are for 1979 and 1980, by which time the program had been in effect for many months. The adjustment of recipients would have taken place earlier, and accordingly the data are too late to be useful. But the Manitoba data refer to the first and second year of its program and they also show no induced mobility. This evidence is very important because in the first year of the program all recipients are in their first year of adjustment to the impact of the allowance on their equilibrium demand.

The separate first- and second-year data of the Manitoba program reward further analysis. To see this, assume, counter-factually, that half of all second-year (1981) recipients joined in January of the first year (1980) and the remainder in January of the second year. Assume that all adjustment occurred through moving, and assume that adjustment took place according to the parameters estimated by Hanushek and Quigley (1979). These parameters refer to a period of six months and are 0.431 for the proportion of a positive change in equilibrium demand translated into an actual increase and 0.2645 for the proportion of an initial disequilibrium translated into an actual increase.²⁰ Thus, in the first year, adjustment is estimated at $0.431 + 0.2645(1 - 0.431) = 0.5815$. In a recipient's second year it is $0.2645(1 - 0.5815) + 0.2645(1 - 0.6922) = 0.1921$. Given the assumption that in the second year of the program half the recipients were in their first year of participation and half in their second, the mean adjustment in the second year of the program would be 0.3868, or 1.48 times the adjustment in the first year. This implies that the allowance-induced mobility rate in the first year of the program would be 48 per cent greater than that in the second year. Now suppose that

TABLE 14

The mobility of low-income, elderly, and family renters, urbanized core of CMAs, Canada 1974

	At least one move within last year (percentage)
<i>Elderly households^a</i>	
Below the poverty line ^b	11.2
Between the poverty line and twice the poverty line	9.8
<i>Family households below 1.5 times poverty line^c</i>	
All households	25.5
Two-parent households ^d	20.8
One-parent households ^e	34.7

a Unsubsidized households.

b With 1974 income below Statistics Canada 1974 low-income cut-off.

c Subsidized and unsubsidized households with at least one child under age 18 and with 1974 income below 1.5 times Statistics Canada 1974 low-income cut-off.

d Family households with married head, spouse present.

e Family households with non-married head.

SOURCE: Elderly households: Table 6, above; family households: Survey of Housing Units, 1974 Micro Data File.

allowance-induced moves were the quite small number indicated by EHAP findings – roughly 8 per 100 recipients.²¹ Then the increase in the mobility rate relative to the control should be 4.8 percentage points in the first year and 3.2 in the second year, a differential of 1.6 between the two years. Yet the actual differential for Manitoba between 1980 and 1981 is a mere 0.6 percentage points. This tiny 1980-1 differential is especially important evidence against the hypothesis that the ICPOR allowance induces mobility because it is internal evidence. Its validity does not depend on the validity of using the SHU households as controls.

It might be argued that the finding of very little or no effect in the case of the elderly cannot be generalized to other household categories because of the low level of the elderly mobility rate. However, the mobility rates of family recipients also show evidence of little allowance-induced effect. The mobility rate for family recipients in the first year of the Manitoba program is just 26.6 per cent (Table 15), only very slightly more than the 25.5 per cent rate estimated for low-income SHU renter families (Table 14). This very small overall effect,

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TABLE 15

Mobility rate (percentages) by household type, housing allowance recipients in British Columbia and Manitoba

	Singles	Couples	Sharers	Total
<i>British Columbia</i>				
1979	11.7	15.5	18.8	12.3
1980	9.2	12.0	14.8	9.6
<i>July-December</i>				
1978	5.3	6.4	7.2	
1979	6.3	8.6	11.6	6.7
1980	5.6	6.6	7.1	5.7
1981	4.8	5.4	5.5	4.8
<i>Manitoba elderly</i>				
1980	11.4 (11.5 ^b)	14.8 (13.2 ^b)	13.7 (12.7 ^b)	11.7 (11.6 ^b)
1981	10.6 (10.6 ^b)	13.7 (13.0 ^b)	18.2 (18.3 ^b)	11.1 (11.0 ^b)
	One-parent	Two-parent	Total	
<i>Manitoba families</i>				
1981	29.2 ^b (31.0 ^c)	23.6 ^b (26.1 ^c)	26.6 (29.2)	

a For British Columbia and Manitoba elderly recipients, this is 'Number of clients with address change (last six months)' among current recipients (i.e. computation is performed only for 'actives') for June plus the same for December divided by the number of December recipients; except that the number of recipients for British Columbia for 1978 is taken as the number in September 1978 and the July-December mobility rate uses only last-six-month address changes for December.

b Sum of the mobility rate as defined in note a for the first six months (with denominator the number of June recipients) and the rate for the last six months.

c Annual monthly rate calculated using the April 1981 number of recipients as the denominator for the first half rate.

SOURCES: SAFEF and SAFFR Program Statistics, especially Report S28, obtained from Jim Zamprelli, Manitoba Housing and Renewal Corporation, and Lenke Turje, British Columbia Ministry of Human Resources; and British Columbia Ministry of Municipal Affairs and Housing (1978a).

it should be noted, masks an apparent induced increase in mobility for two-parent families and an induced decrease for one-parent families.²²

Market conditions and mobility

The data allow some assessment of the impact of different market conditions on the mobility rate. The data for elderly singles (Table 15)

give some but not much support to the proposition that there were more allowance-induced moves in Manitoba than in British Columbia. Consider first the data for 1980. It was the first year of the Manitoba program – so that a high proportion of ever-adjusting households would adjust in that year – but into the fourth year of the BC program. Yet the mobility rate was only 2.1 percentage points higher in Manitoba. The mobility rate in the second year of Manitoba's program, however, also is greater than the 1980 BC rate. It thus seems plausible that the enormous difference in the vacancy rates between major CMAs in the two provinces – 5.1 per cent in Winnipeg in October 1980 and 0.1 per cent in Vancouver (*Canadian Housing Statistics*, 1981, Table 18) – had some impact on moves. Whether it had some impact on *allowance-induced* moves is a more difficult question. There is some presumption that it did have, in view of the fact that the larger number of allowance-induced moves in Phoenix than in Pittsburgh in EHAP is generally taken to reflect the much looser market in Phoenix.

The time series data from British Columbia are consistent, however, with the hypothesis that the tightness of the market has little effect on allowance-induced mobility. First, it is evident that an extremely tight housing market still allows a substantial amount of moving. In 1980, when there were essentially no vacancies in Vancouver, 9.6 per cent of recipients did move. Evidently the effect of very few vacancies was to reduce mobility slightly, not to eliminate it. Further, the mobility rates among BC SAFER recipients for the last six months of 1979 and 1980 are slightly higher than the mobility rate for the last six months of 1978, although the vacancy rate was only 0.2 per cent and 0.1 per cent in October 1979 and October 1980, respectively, as compared with 1.4 per cent in October 1978 (*Canadian Housing Statistics*, 1981, Table 18).²¹

V HOUSING CONSUMPTION RESPONSES IN MANITOBA

Although the ICPOR allowance has had little or no effect on mobility, it could still have an effect on the housing consumption of recipients if it induced an increase in housing consumption among those who did move or among stayers. Before considering the evidence on this it is useful to examine the implications for an ICPOR allowance of unitary income and price elasticities of demand.

Implications of unitary income and elasticities of demand

Until recently the predicted effects of a price subsidy and an income subsidy would typically (e.g. Fallis, 1980) have been based on a Cobb-Douglas demand function for housing services (or one fundamentally similar to it):

$$h = a \frac{Y}{P_H}, \quad (5)$$

where h is housing service demanded, P_H the price of housing service, and Y the income of the household net of any housing allowance payment. This demand function implies unitary price and income elasticities. Further, a unitary price elasticity implies that rent, i.e. expenditure on housing services, $P_H \cdot h$, does not change when P_H changes. This can be seen by noting that (5) implies that

$$R = P_H \cdot h = aY, \quad (6)$$

where R is rent. Note also that a unitary income elasticity implies that the rent-to-income ratio is unaffected by changes in income; that is, (6) implies that $R/Y = a$.

Now let $\beta P_H \cdot h$ be the ICPOR payment when the payment is, in effect, a price subsidy. Then (6) is rewritten $P_H (1 - \beta) \cdot h = aY$, or $P_H h - \beta P_H h = aY$, or $P_H h = aY + \beta P_H h$, and it can be seen that rent net of the payment is constant and rent rises by the amount of the payment. Alternatively, let the ICPOR payment be, in effect, an income subsidy equal to γY , in which case (6) is rewritten $R = aY (1 + \gamma)$, or $R = aY + a\gamma Y$, and thus rent rises as a consequence of ICPOR by the original rent-income ratio times the ICPOR payment.²⁴

Predicted rent increases for three cases

Now consider what this implies in three specific cases, using 1980 ICPOR parameters for elderly Manitoba recipients. First, consider a single recipient for whom the ICPOR payment is in effect a price subsidy because her rent is well below R^* . Specifically, suppose the recipient in March 1980 had a rent of \$150 per month and an income of \$290 per month.²⁵ Then her housing allowance would be \$63.225.²⁶

Further, if R^* were infinity and if her price elasticity were unity, then her equilibrium rent, given the Manitoba parameters for percentage-of-gap and contribution rate, would be \$782.75 – an increase of \$632.25.²⁷ In 1980, the threshold rent for singles was \$205, not infinity, but unitary elasticity implies an increase in rent at least up to the threshold rent, and so the increase in rent in equilibrium for this recipient must be greater than \$55 ($= \$205 - \$150$), i.e. an increase of more than 37 per cent.

Alternatively, suppose that the recipient was initially paying a rent equal to threshold rent, making the housing allowance an income subsidy. Specifically, suppose her income was \$400 and rent \$205 per month.²⁸ Then the allowance payment would be \$67.71.²⁹ If her income elasticity were unity her equilibrium rent would be \$239.70,³⁰ an increase of 17 per cent.

Finally, consider a recipient with initial income and initial rent the same as the March 1980 means – \$411.03 and \$192.78, respectively. Suppose that the threshold rent was \$192.78. Then this recipient would receive an allowance of \$54.04, and, assuming an income elasticity of unity, the consequent increase in rent would be $(192.78/411.03) \times 54.04 = 25.35$, or 13.1 per cent. Because the threshold rent was actually \$205, not \$192.78, the increase in equilibrium rent, assuming (6) holds, would be greater than 13.1 per cent.

Actual rent increases

Now consider the evidence (Table 16) on rent changes for the first year-and-a-half of the Manitoba programs. For non-movers, the mean rent change is estimated at 6.4 per cent for the elderly and 7.4 per cent for families. This is *less* than the increase in the Winnipeg rental component for the consumer price index by 2.2 percentage points for the elderly (1980/1) and 3.4 percentage points for families (1981/2). In view of the downward bias of the consumer price index's rent component (Fallis, 1980), shown here by the substantially greater increases for 1980 estimated using the CMHC Vacancy Survey data (Table 16, first row), it seems safe to conclude that allowance recipients who were non-movers did not increase their housing consumption by persuading their landlords to upgrade. It also seems safe to conclude that they did not make fraudulent rent claims and were not victims of the market power of individual landlords.³¹ Except to the extent that non-movers upgraded their units with their own funds

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TABLE 16
Mean rent change, mover and non-mover recipients, Manitoba

	First 1½ years of program ^a		
	Mean percentage rent change	Change in CPI Winnipeg rental component (percentage)	Year-over-year change in CMHC Winnipeg vacancy survey rent ^b (percentage)
<i>Elderly recipients</i>			
Non-movers ^c	6.4	8.6	12.6
Movers ^d	4.7		
<i>Family recipients</i>			
Non-movers ^c	7.4	10.8	10.4
Movers ^d	8.4		

a For elderly January 1980 to August 1981; for families, January 1981 to June 1982.

b For elderly, unweighted mean of percentage change in median rent for one-bedroom units and for two-bedroom units, April 1980–April 1981; for families, unweighted mean of percentage change in median rent for two-bedroom units and for three-bedroom units, October 1980–October 1981.

c Mean rent change for all rent changes not associated with a move (computed like the mean rent change, movers, with values of 9.2 per cent for the elderly and 10.6 per cent for families) times 0.7. (Manitoba law allows only one rent increase per year for non-movers, and so the difference between the mean computed over all non-movers with rent change and the mean over all changes is probably slight. The 0.7 weight assumes that 30 per cent of non-movers had a zero rent change. In Ontario in 1980 it is estimated that in London 28.8 per cent of non-movers had no rent change, in Hamilton 23.9 per cent, in Windsor 39.9 per cent, in Thunder Bay 41.7 per cent (Ontario Ministry of Housing, *Rental Market Survey for 1980*, Toronto 1981). Vacancy rates for these cities were 4.1 per cent, 1.3 per cent, 6.1 per cent, and 1.0 per cent, respectively (*Canadian Housing Statistics*, 1981, Table 18).

d Percentage changes given here are weighted mean of mean positive and mean negative percentage changes. Each observation is on a move, not a household. Thus, strictly, what is shown here is the mean percentage rent change for moves, not movers. More than 87 per cent of the moves, however, were a recipient's only move while within the program.

SOURCES:

Rent change mover recipients: Elderly: Minuk and Davidson, 1981, p. 28; family: Morley Minuk, Manitoba Housing and Renewal Corporation, 1982.

CPI rent component: CANSIM D487283, Statistics Canada.

CMHC vacancy survey rent: CMHC Winnipeg Office.

and labour, it seems safe to conclude that the housing response of non-moving recipients to the allowance was zero or undetectable.

This finding for non-movers is remarkable. Even more remarkable

is the finding for movers. This mean percentage rent increase for movers is less than the percentage increase in the market price of housing service (see Table 16) both for the elderly and for families. This, *prima facie*, implies a reduction in the consumption of housing services. Thus, apparently, the response of the mean housing allowance recipient in Manitoba was to reduce housing consumption very slightly. The assumptions of unitary elasticities involved in (5) are clearly untenable.

Housing bargains

An alternative interpretation of the data is that the small rent change for movers reflects not a decline in their housing consumption but rather their success in obtaining housing bargains.³² Winnipeg in 1980, 1981, and 1982 was plausibly a fertile place for rental bargain hunters. The housing market was loose (5.1 per cent vacancy rate in October 1980, 3.5 per cent vacancy rate in October 1981), and landlords, released from rent control from mid-1980 until the end of 1981, may have found it difficult to obtain information about optimum rents. The greater differential between the consumer price index increase and movers' increase for the elderly than for families (3.9 percentage points as compared with 2.4 percentage points) is consistent with the marked reduction in the vacancy rate between the time (1980/1) the elderly moved and the time (1981/2) families moved.

It is of interest to note that these data indicate that allowance recipients may search assiduously for housing bargains, despite the ICPOR disincentive for doing so. The hypothesis that allowance recipients prize housing bargains is supported by the results of the Manitoba survey of elderly recipients. Recipients who had not moved and did not plan to were asked why: 89 per cent replied that they were satisfied with their present residence, 76 per cent that they were close to amenities and services, and 67 per cent that rent was 'reasonable.' Reasonable rent, indeed, was the third most frequently mentioned reason for not moving.³³

The possible role of changes in Y and P_H

This discussion of the estimates of Manitoba rent change has implicitly assumed that the only change affecting recipient households was the receipt of the housing allowance payment. But over the one and a half years considered, recipients would typically experience changes

in Y and P_H as well. In fact, P_H , the real supply price of housing services, apparently fell for both periods considered.³⁴ This decline by itself would tend to increase housing consumption, and so it makes the observed rent changes of recipients even more remarkable than they appear at first sight. Further, Y – real income – was almost certainly virtually constant over this period in the case of elderly recipients, because almost all their income was from OAS and GIS and both these transfer payments are indexed. Thus, for the elderly, consideration of possible changes in Y and P_H contemporaneous with the payment of the allowance does not change the conclusion that overall there was almost certainly no housing response to the allowance.

For family recipients the facts about income are much less clear because there is reason to suppose that most of their income is not transfer income.³⁵ The mean income data for recipients, however, suggest that there was not much change in the real income of the typical recipient over the period considered. For instance, the mean nominal income for single-parent recipients was \$6,947 in March 1981, and it was only 4.3 per cent greater nine months later (Table G1); for two-parent recipients it was \$8,064 in March 1981 and 1.9 per cent greater nine months later (SAFFR Program Statistics). These data, however, say nothing about the income of the typical recipient just previous to receiving SAFFR. While for the elderly there is a strong presumption that there was little change in real income in the period shortly before receiving the allowance, there is no such presumption in the case of family recipients. Indeed, it seems plausible that the typical recipient families – especially two-parent families – had suffered a substantial decline in current income shortly before receiving SAFFR. This, of course, would change the interpretation of the data for family rent change. This point will be returned to in the concluding section of this chapter.

VI HOUSEHOLD SPLITTING

One way for households to increase their housing consumption in response to an ICPOR allowance is to split. For instance, two elderly sharers, instead of moving together to a larger apartment, can each move to their own apartment. As was pointed out in the previous chapter, the subsidy for increased consumption of this sort is especially large for the elderly in the BC plan because of the nature of its parameter values.

Splitting among the elderly

Some evidence of the demand of the elderly for increased housing consumption through household splitting is available in Steele (1979). For elderly singles the effect of an increase in permanent income on the probability of heading a household is very great; an increase in income from \$5,000 to \$10,000 (1970 dollars) increases the probability by well over 20 percentage points. But for the widowed, separated, and divorced, the effect is less than 10 percentage points and an increase in transitory income has a far lower impact than this.⁴⁶ The widowed dominate the elderly population who are not married; and there are some good reasons for SAFER recipients to view their allowance as transitory, as discussed below. This suggests that the overall effect of a housing allowance on household splitting will be very small. It appears likely that for many elderly people the companionship and support of children, sisters, and friends are preferable to the privacy of their own dwelling unit. For them, more housing would be less. If the availability of public housing for the elderly has not induced them to split from their original household, it seems unlikely that a housing allowance would induce many to do so.

Now consider the housing allowance evidence. Household splitting induced by SAFER shows up in two ways. First, some households that split would be ineligible before but eligible after the split. Thus household splitting should increase the number of recipients of SAFER. Second, sharer recipient households may split, reducing the number of SAFER sharers and increasing the number of singles. In fact the number of elderly recipients of housing allowances has grown substantially in Manitoba (Table G1), but a major enrichment of the formula occurred there in January 1981. In New Brunswick, numbers have remained stable over time, and in British Columbia they have fallen substantially. The latter decline is probably associated with the rising incomes of the elderly over the period. It suggests that the separate effect of the housing allowance in encouraging non-recipients to become recipients by increasing their housing consumption, either by splitting or in other ways, must have been very small.

At first sight the information on sharers presented in Table 17 indicates that elderly households already in the program did respond to the housing allowance incentives by splitting. In British Columbia there has been a steady decline in the proportion of sharers, and there has also been a decline in Manitoba. It can be seen, however, that

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TABLE 17

Evidence on household splitting, British Columbia and Manitoba

Date	Sharers	Couples	Two-parent families
<i>A. Incidence of selected recipient types among elderly^a recipients (percentages)</i>			
<i>British Columbia</i>			
September 1978	3.9	12.7	
December 1979	3.2	11.2	
December 1980	2.8	9.6	
December 1981	2.2	8.2	
<i>Manitoba</i>			
March 1980	3.0	9.1	
December 1980	2.1	6.3	
December 1981	2.9	8.3	
<i>B. Incidence of two-parent families among Manitoba family recipients (percentages)</i>			
March 1981			43.6
June 1981			42.5
December 1981			36.8
June 1982			36.4

^a 65 or over.

SOURCE: As for Table 12 and Jim Zamprelli, Manitoba Housing and Renewal Corporation.

these patterns almost precisely parallel those for married couples. On the presumption that married couples are much less likely than unmarried sharers to be induced by economic incentives to split, it is implausible that the decline in SAFER sharers is a response to the incentives in the housing allowance. The data show that couples and sharers are typically sufficiently well off that they are close to the eligibility margin. Thus a plausible explanation for the observed pattern is that the rising incomes of the elderly pushed many couples and sharers over the threshold income. Altogether the data suggest that the ICPOR housing allowance has had very little effect on household splitting among the elderly.

Splitting among families

Evidence from Steele (1979) suggests that the potential for household

splitting in general among single-parent mothers who are separated, divorced, and widowed is not very great, simply because such a high proportion of them, like elderly widows, are household heads. For singles under the age of 30, however – the age group of about half the single-parent recipients in Manitoba – the estimated impact of an increase in income is large, but this estimated impact is not corrected for the presence of children (see Steele, 1979, Tables 5.8–5.10), and such a correction might reduce the estimated impact greatly.

This evidence indicates nothing about the demand for increased housing associated with marriage dissolution. Steiner reports (1981, p. 106) that in an income-maintenance experiment family dissolution among white experimental women exceeded that among controls by 61 per cent. This increase is less important than it seems at first sight, as Watts and Skidmore have pointed out (1981), because of the low level of dissolution and the probable high rate of remarriage. Watts and Skidmore suggest that the major impact of a housing allowance would be on splitting among young singles.³⁷

The evidence from Manitoba on splitting among families is somewhat contradictory. The stable total number in the program after its first few months (Table G1) implies that unless there have been strong other factors depressing recipient numbers, family splitting has not by itself resulted in an increase in the number of housing allowance beneficiaries. However, as Table 17 shows, there has been a marked decline in the incidence of two-parent families. The explanation may lie in the very generous regulations for roomers, discussed in the previous chapter. Perhaps some common-law relationships are now reported as single-parent family plus 'roomer' rather than as two-parent family. This explanation is consistent with the report from SAFFR administrators that 'household composition is the section most often misreported on the application.'³⁸ If this explanation is correct, then the pattern shown in Table 17 may best be explained not so much by household splitting as by misreporting. This may be fraudulently intended or may arise from a view that a transient relationship with no regular, assured sharing of expenses should not count as a common-law marriage.

VII LOCATION CHANGE

An ICPOR housing allowance subsidizes a change in location from a low-priced area to a high-priced area. As pointed out in chapter 3,

however, the subsidy will be reduced if a household in a low-priced area is paying less than the required contribution rate or is paying a rent that is little less than the threshold rent. Further, if the threshold rent does not vary by location, a recipient paying less than R^* and choosing to move to a higher-priced location in effect gives up a subsidy for upgrading in order to get a subsidy for location change.

In any case, there is no evidence that elderly households in British Columbia moved from outlying parts of the province to Vancouver or Victoria. The proportion of recipients in these two cities has remained year after year remarkably close to the 76 per cent it was in September 1978, not much more than a year after the program's beginning.³⁹ This proportion is so high that one might characterize rental housing allowances as very largely a program for big-city dwellers.

It might be objected that the BC experience is not a very useful basis for inference about experience elsewhere because of the extremely low vacancy rates in Vancouver and Victoria. However, Manitoba's experience is very similar to British Columbia's – the proportion of the elderly in Winnipeg stayed at 78 per cent (Table 18) – and the vacancy rate in Winnipeg was high over this period.

It might be objected further that the effect on location of a housing allowance may be very different for non-elderly than for elderly. But the Manitoba data show that over the short period that program has been in effect there has been little change in the proportion of family recipients in Winnipeg.

VIII THE LOW HOUSEHOLD RESPONSE: EXPLANATIONS AND HYPOTHESIS

Why has the response to housing allowances been so small? At one level the answer is that the *a priori* evidence implies a small response. While it was widely believed in the early 1970s that housing demand was elastic (de Leeuw, 1971), by the late 1970s evidence had accumulated that it was not, especially for low-income renters. For instance, this writer found for 1971 low-income renters elasticities with respect to permanent and transitory income of just 0.19 for Toronto and 0.12 for Montreal (Steele, 1979, Table 7.8); Hanushek and Quigley (1979, p. 100) found elasticities with respect to current income of 0.15 and 0.23 for low-income renters in Pittsburgh and Phoenix.

At another level it can be asked why low-income households devote so little of any income increase to housing. One answer is that often they are *already* spending more than they would freely choose to spend

TABLE 18

Evidence on rural-urban location, British Columbia and Manitoba: incidence of CMA location (percentages)

BC recipients located in Vancouver and Victoria ^a		Manitoba recipients located in Winnipeg			
		Elderly ^b		Families	
September 1978	76.2				
December 1979	75.8	March 1980	77.9	March 1981	82.7
December 1980	74.5	December 1980	78.7	June 1981	74.7
December 1981	74.3	December 1981	78.0	December 1981	76.2

^a Vancouver and Victoria taken as Greater Vancouver Regional District plus Capital Regional District.

^b 65 and over.

SOURCES: As for Table G1.

in an unregulated market. Building and housing standards regulations dictate, for instance, that if they wish to occupy a self-contained set of four rooms in an urban area, usually they must occupy (and pay for) four well-built rooms with complete basic facilities.⁴⁰ The quite high incidence of primitive toilet and other facilities in rural areas among low-income households (see chapter 2) is presumptive evidence that many low-income urban households would prefer to spend their money on more and better food, clothing, and other goods and services rather than on certain housing characteristics that they are currently forced to spend it on.

Still, although past evidence would have indicated that the response to the housing allowance would be very low, it would certainly not have predicted it to be zero. Recent estimates of income and price elasticity applied uncritically here would imply an increase of at least a few percentage points in recipients' consumption of housing services.⁴¹ There are good reasons why such an increase might not occur, however - reasons that do not fit comfortably into most consumer models.

The cost-benefit analysis of a residential move

These reasons may be seen more clearly by undertaking a cost-benefit analysis of a residential move. A move is only rationally undertaken if the present value of the stream of benefits of the move is greater than the present value of the costs. The costs include search and information costs, the costs of moving physically, and the cost of

adjustment to the new dwelling and landlord and perhaps to a new neighbourhood. These costs are incurred early to gain a stream of benefits spread over a long time. As a consequence, the present value of the costs will be higher relative to the benefit the greater the time preference of the household. Low-income households that are typically short of ready cash will thus perceive a particularly high moving cost.⁴²

The benefit of a move is the present value of the increase in the housing service that the household consumes minus the present value of the increase in the household's own outlay required to obtain that service. For a given fairly large increase in rent – say 20 per cent – the increase in housing service may be very small for a number of reasons. First, the household will probably be the beneficiary of a length-of-tenure discount that is lost if it moves. The discount may be particularly large under a regime of rent control, partly because illegally large rent increases are difficult to impose when there is no turnover. Second, the household may be occupying a bargain unit and may not be able to find, among dwellings delivering a greater amount of housing service, another bargain unit. Third, the household's valuation of a given increase in housing service (as measured by the money the household would freely give up to obtain that increase in the absence of transaction costs) is apt to be very low. This latter point follows as an implication of the low income and price elasticities of demand of low-income households.⁴³ Weinberg, Friedman, and Mayo (cited in Rossi, 1981) found that households paying \$150 per month rent and offered a subsidy of \$60 a month had an expected net benefit from the move of only \$3 per month.

If a household is initially paying a rent greater than R^* , any increase in rent for a move to a different dwelling is entirely unsubsidized. The data in Table 19 show that a large proportion of recipients are indeed paying more than R^* , and so the increase in their own outlay would be the entire difference between the rent of the original unit and that of the new unit. In December 1980, 40 per cent of single BC recipients and 48 per cent of single Manitoba recipients were paying R^* or more. Of the remainder, very few were paying sufficiently less than R^* to allow a substantial subsidy of any increase in rent. Specifically, only 15 per cent of BC singles and 12 per cent of Manitoba singles were paying \$60 or more less than R^* .

In one of the provincial plans R^* is indexed, and so recipients have no assurance that the rent differential between their original dwelling

TABLE 19
Rents paid and threshold rent, British Columbia, Manitoba, New Brunswick
A.

	Relation of rent paid to threshold rent (R^*) in percentages					
	Singles			Couples		
	At or above R^*	Less than $R^* - 40$	Less than $R^* - 60$	At or above R^*	Less than $R^* - 40$	Less than $R^* - 60$
<i>British Columbia</i>						
R^* increased to \$175 singles, \$200 couples, Sept 1978	25.0	38.4	25.6	44.2	7.4	1.8
September 1978	41.2	25.2	15.3	66.8	1.7	0.7
December 1979						
R^* increased by \$50 singles, \$45 couples, March 1980						
March 1980	25.4	37.8	23.6	47.9	8.5	1.4
December 1980	40.3	27.0	15.8	67.7	1.7	
R^* increased by \$40 singles, \$50 couples, July 1981						
December 1981	31.7	35.5	23.0	53.2	6.2	1.2
<i>Manitoba elderly</i>						
March 1980	39.9	28.0	16.6	62.9	4.2	2.0
December 1980	48.0	21.6	12.2	72.1	1.3	0.6
R^* increased by \$35 to \$240 singles and by \$45 to \$270 couples, January 1981						
March 1981	24.7	46.5	31.5	32.7	29.2	10.9
December 1981	38.7	34.2	21.6	49.6	17.2	0.1

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TABLE 19 (continued)
Rents paid and threshold rent, British Columbia, Manitoba, New Brunswick
B.

	Relation of rent paid to threshold rent (R^*) in percentage ^a		
	At or above R^*	Less than $R^* - 40$	Less than $R^* - 60$
<i>New Brunswick^a</i>			
All recipients			
July 1981	66.8	9.4	3.9
<i>Manitoba families^b</i>			
Two persons			
March 1981	36.4	39.6	29.7
December 1981	39.6	31.4	23.6
Three or more persons			
March 1981	23.9	51.8	40.7
December 1981	31.6	45.4	33.4

a R^* taken as \$180. This was the program R^* for singles; the R^* for couples was \$205.

b For four-or-more-person families the number above R^* (\$310) is taken as the number above \$300.

SOURCES: As for Table G1.

and their new one will attract a constant proportional subsidy in the future. Indeed, the discontinuities in the pattern over time of the proportion of tenants paying more than R^* (Table 19) is a clear warning of the risks of non-indexation.

A major factor reducing the benefit of a move for many households is a short period of eligibility for the housing allowance. An elderly recipient loses the subsidy if her rent rises at a sufficiently lower rate than OAS and GIS payments, if she dies, or if she enters a hospital or nursing home and gives up private accommodation. A family recipient loses the allowance if her income rises sufficiently (a particularly likely event if she is currently on Unemployment Insurance [UI] benefits), if her children leave home, if she marries a man with a sufficiently high income, or if she is offered and accepts a place in public housing or in certain non-profit or co-op housing projects. Evidence from Manitoba suggests that the period of eligibility of many recipients is quite short. In the case of the elderly, in December 1980, there were 2,384 recipients, but 509 people who at some time in 1980 had received an allowance did not receive one in that month. This

represents a drop-out rate of 21.4 per cent. For families the drop-out rate is much higher; for 1981 it is 63.8 per cent.⁴⁴ It is clear that for most family recipients estimation of the net benefits of a move should assume that the allowance will be received for little more than a year.

Expectation of a short period of eligibility for the allowance may not be an *important* factor in reducing responsiveness. The termination of eligibility, after all, arises in many cases because of an improvement in real income: the recipient loses eligibility for the allowance because she no longer needs it. But if a recipient expects her income to increase in the future, she will also expect her equilibrium housing service demanded in the future to increase, so long as demand elasticities are positive. Accordingly, assuming zero transactions costs, and assuming initial housing consumption at equilibrium, she will expect to move in the future. In this case, the housing allowance will merely allow her to move earlier than she otherwise would have; she would incur the cost of the move whether or not she became a housing allowance recipient. Put another way, the cost of the move is offset not only by the stream of benefits of the move received while she is an allowance recipient but also by the stream of benefits received after she loses eligibility. Thus, even if a stream of housing allowance benefits is expected to be short-lived, it should induce mobility (through 'early' moves) and increased housing consumption, so long as transactions costs are not too great and initial housing consumption is in equilibrium.

Negative transitory income and the adjustment of housing consumption

The data used in this chapter include none on the demographic and economic history of housing allowance recipients for the years before they became recipients. Such data are not available. Yet these might critically change the interpretation of the current housing allowance data. In particular, family recipients of the housing allowance are quite likely to have current income well below permanent income. A family may have become eligible for SAFFR because the head became unemployed and is now receiving Unemployment Insurance (UI) benefits rather than earnings, or family income may have dropped because of the departure of one parent. If this is the case, the role of SAFFR may be to sustain the family in the accommodation it could afford before its period of large negative transitory income but could not afford afterward, without the aid of SAFFR. SAFFR is acting to pre-

vent, reduce, or delay adjustment from an above-optimal level of housing consumption to a lower level. To the extent that this is true, SAFFR is inducing an increase in housing consumption above what it would otherwise have been.

There is some presumption that the upper limit on the possible size of this effect is not very great. First, a SAFFR administrator believes that about half of all recipients have been social assistance recipients at some time in the past,⁴⁵ indicating that their negative transitory income is probably not very great. Second, SAFFR administrative data suggest that UI recipients and families with no income account for less than 35 per cent of all SAFFR recipients.⁴⁶ Third, there is evidence that negative transitory income has a relatively small effect in reducing housing consumption for low-income renters. Steele (1979, Table 7.8) found that the marginal impact of a dollar of transitory income is just 66 per cent of that of a dollar of permanent income for low-income Toronto renters in 1971, and just 61 per cent for Montreal. These figures compare with 70 per cent and 81 per cent, respectively, for middle-income renters in the two cities. (All coefficients used in these calculations are significant at the 1 per cent level.) These data suggest that the transactions cost of a move may prevent many low-income families from adjusting housing consumption when income fluctuates. Fourth, while there is some suggestion in Tables 14 and 15 that SAFFR single-parent families moved less frequently than control families, the size of the difference is not very great, especially in view of the problems in the data.

It is also possible that the receipt of the housing allowance prevents or reduces the downward adjustment of housing consumption of elderly recipients with negative transitory income. The possibility of this being of substantial importance seems far less for the elderly than for families, however. The vast majority of elderly recipients receive both OAS and GIS and are over 70 years old, and so they must have been recipients for some years. Retirement would generally have taken place years earlier, so that any adjustment to the associated change in income could have been very largely completed by age 70. There is some presumption, however, that the housing allowance might be preventing downward adjustment by recent widows. None the less there is no evidence in the mobility data (Tables 14 and 15) that elderly housing allowance recipients move (and so adjust) any more or less frequently than otherwise similar non-recipients.

IX SUMMARY AND CONCLUSION

This chapter has analysed the evidence on household response to ICPOR housing allowances, using data from British Columbia, Manitoba, and New Brunswick. In all cases the size of the housing allowance program is small. British Columbia has the largest number of recipients, about 11,000 in 1981, and Manitoba the largest average monthly payment, over \$60 to single elderly renters in December 1981, and somewhat more to families (Table G1). The typical recipient is a very old widow living alone or, for the family allowance program in Manitoba, a young single-parent mother with one or two children. Mean incomes are slightly below the poverty line in the case of the elderly and substantially below the poverty line in the case of families.

The participation rate in the housing allowance programs is far below the 100 per cent usually assumed in cost estimates. For British Columbia the participation rate is estimated to be between 54 per cent and 64 per cent, depending on the treatment of the Renter's Tax Credit, and there is no evidence that participation is any greater in the other two provinces. This far-from-full participation is remarkable. An eligible is defined here as one whose income is low enough and whose rent is high enough to make him eligible without changing housing consumption. Thus the costs of participation are merely the costs of becoming informed, of filling out the application form, and of overcoming any reluctance to accept a transfer payment. The evidence suggests that the first two costs were critical and fell disproportionately frequently on the very poorest of the eligibles, who were presumably the least educated and competent. The large number of eligibles who never receive the housing allowance impairs the usefulness of housing allowances and indicates that programs to increase participation are of importance. However, the allowance participation rate is much higher than the estimated rate for the Manitoba negative income tax experiment.

In order to increase housing consumption substantially, a renter household will usually have to move. There is evidence that the housing allowance induced few households to move, except perhaps some two-parent families. Further, the loose markets in Winnipeg were not associated with appreciably more moving than the very tight markets in Vancouver. Did the non-movers increase their housing consumption none the less? No. Among non-movers in Manitoba, the mean rate of rent increase was less than the increase in the CPI rent compo-

nent. This finding also suggests that the incentive for landlord-tenant fraud is not very strong or is heavily discouraged by factors such as landlords' inability to identify allowance recipients.

The housing consumption response to the allowance would be positive if mobility were unaffected by the allowance, but those who did move increased their housing consumption. But for movers, as for non-movers, the rate of rent increase was actually less than the increase in the CPI rent component. This is consistent with a decline in housing consumption, but a more plausible explanation is that the state of the Manitoba housing market allowed movers to find housing bargains. The finding of a decline in deflated rent, it should be noted, gives no support for the view that a housing allowance will affect the search for housing bargains.

While one way to increase housing consumption is for a household to move, intact, to a dwelling with more housing service, another way is for the household to split. Household splits among eligibles will increase the number of recipients and increase the number of small households. In fact, the numbers of recipients have been stable or declining, so that the first manifestations of splitting have not occurred. Of course other factors causing declines in recipients may have masked the effect of splits. But the consistency of the patterns of numbers for sharers - unmarried elderly people sharing - and for couples supports the tentative conclusion that few splits were induced by the allowance programs. The data for families over time show a marked increase in the proportion of one-parent families, but this appears to be the consequence of the generous treatment of roomers and the ambiguous nature of many common-law relationships, rather than genuine family splitting. Thus the housing allowances have induced little increase in housing consumption through household splitting and have not induced family splitting which may be undesirable on non-housing grounds. However, they have perhaps induced a substantial amount of bias in the reporting of the nature of the relationship between young mothers and their male co-inhabitants.

Over the period the housing allowances have been in effect in Manitoba and British Columbia there has been strikingly little change in the proportion of recipients living in the big cities. The incentive in the housing allowance for a change from rural areas with low rents to urban areas with high ones has apparently had little effect. Over three-quarters of recipients are big-city dwellers, so that the housing allowance is clearly a big-city housing program.

The very slight response of households to housing allowances is far from what has been generally predicted (e.g. Clayton and Associates, 1981). Why? One reason is that the price and income elasticities of demand for housing by low-income families are only about -0.2 and $+0.2$, respectively, far less than was commonly supposed a decade ago. These low elasticities may be partly the outcome of the forced over-consumption of certain housing characteristics because of building by-laws and other municipal regulations. Other reasons have to do with the cost of moving. A rational household considering a move will undertake it only if the costs are outweighed by the benefits. The benefits are reduced by the loss of a length-of-tenure discount, the difficulty of obtaining another bargain unit for those already in possession of one, the trading of a dwelling unit with known quality characteristics for one without, and the non-indexation of R^* threshold rent in the ICPOR formula. The importance of the last factor, despite the periodic increases in R^* , is shown by the large fluctuations in the proportion of recipients paying more than R^* . Further, for many households the duration of benefit is very short: the typical family recipient receives the allowance for little more than a year.

The conclusion thus far – minimal consumption response by households to the housing allowance – must have a caveat attached. Although there is little information about the previous status of recipients, most have probably suffered a recent decline in income. Negative transitory income is probably typical. For this reason, as was pointed out in the previous chapter, they typically will be consuming an above-optimal amount of housing service. The housing allowance may stop or dampen the reduction in this excess. If so, the housing allowance will increase housing consumption over what it would otherwise have been. If a housing allowance makes it possible for a single-parent mother to remain where she is when she is laid off, instead of moving to worse housing, it has induced an increase in housing consumption. There are indications that this has happened, although the strength of this effect has probably not been very great.

This chapter has demonstrated that the overall effects of the housing allowance have been small. Thus the housing allowance has not 'worked,' if the goal is a substantial increase in housing consumption. Accordingly, this issue of the distribution of the housing allowance assumes prime importance. That issue is addressed in the next chapter but one. In the next chapter the supply side of the housing market is examined to confirm the results of this chapter by

examining their implications for market price and to determine possible long-run effects in the event that long-run response is substantially greater than the response observed so far.

NOTES

- 1 The Toronto proportion was 32 per cent (for 1979). (Data are from British Columbia, Ministry of Municipal Affairs and Housing [1978b] and Metropolitan Toronto Housing Company [1979].) The contrast for the extremely old age groups is even greater: in December 1981, 15 per cent of BC SAFER recipients were 85 or over, while only 4.1 per cent of BC elderly applicants for public housing were in this age group.
- 2 The demographic pattern for the EHAP supply experiment appears quite similar, despite major differences in program formula and regulations. Specifically, only about 30 per cent of recipients were three-or-more- person households, though well over half of all recipients were under age 62 (Straszheim, 1981, Table 8). A major difference in regulations is the ineligibility of social assistance recipients for SAFFR but the eligibility of welfare recipients in EHAP.
- 3 As of July 1981 (data from Claudia Barnett, New Brunswick Housing Corporation).
- 4 The annual income figures here for family recipients are not on quite the same basis as those for elderly recipients, and neither is a true current annual income figure. Each is the income used in the benefit calculation. For the elderly in Manitoba the income used to compute the allowance from July of year t to June of $(t+1)$ is 12 times monthly pension income (OAS, GIS, CPP, private pension, etc.) in May or June of year t plus other income, including total capital gains, received in year $(t-1)$. The income used in the benefit calculation for family recipients for July of year t to June of $(t+1)$ is income in year $(t-1)$ with numerous exceptions: if a recipient says he expects income to be different in t than in $(t-1)$ (about half do), his income is 'reviewed' monthly or quarterly; all recipients with zero reported income must come to the SAFFR office to pick up their benefit cheque and are asked about their income at that time (information obtained in 1982 from Jim Zamprelli, Manitoba Housing and Renewal Corporation, and Manitoba SAFER and SAFFR application forms).
- 5 A crude lower bound to the standard error of the estimate of the participation rate is 9.5 percentage points; 0.095 is the standard error for the proportion 0.54 from this data file using the approximate standard error formula given by Statistics Canada, Consumer Income and Expenditure Division (1978, p. 117). This takes no account of errors in adjusting the data. When these are taken into account a lower bound to the standard error of 15 percentage points is perhaps about right. With this standard error an 80 per cent confidence interval for the participation rate estimate is 34 per cent to 73 per cent.
- 6 The Renters' Tax Credit for the 1978 rental year was \$150 minus 0.015 of 1978 taxable income. For couples, the spouse with the higher taxable income claims (British Columbia Ministry of Human Resources, 1980, *Rentaid* [brochure]).
- 7 In fact a substantial number of recipients fall into the category eliminated here: as of December 1979, 646 singles, 424 sharers, and 432 couples received SAFER payments of \$10 or less per month. HIFE data indicate that most of these would have no taxable income and so would be eligible for an RTC of \$150 per year.
- 8 There are problems of comparability between the EHAP data and the BC data. In particular, the EHAP 'participation rates' cited here (called enrolment rates in the EHAP literature) took as eligibles (in the supply experiment) all households with an income low enough for qualification, whether or not the housing requirement was met. If 'eligibles' had been defined in this way for the estimation here, rather than as

- households with both income low enough for qualification and rent high enough, the estimated BC participation rate would obviously have been lower. There are also some data problems for EHAP participation rates. The rates for the supply experiment given in Cronin (1981a) are substantially higher than those given in Straszheim (1981), and for the demand experiment the opposite is true. The rate estimates used here are in each case the most recent ones: for the supply experiment, the rates given in Cronin, and for the demand experiment, those given in Straszheim.
- 9 The BC data are from a letter from Lenke Turje, BC Ministry of Human Resources, 16 February 1981, the EHAP data from Zais (1981, Table 10.1). Assuming new recipients at 5 per cent per year of SAFER recipients, the outreach cost per new recipient in British Columbia is about \$14. At the beginning of BC SAFER, however, information about it was enclosed with one of the monthly Old Age Security cheques (OAS is a virtually universal program for those 65 years old or over). This was also done in Manitoba, where information about SAFER was enclosed with a monthly Family Allowance cheque (universal for children under age 18). This information is from Jim Zamprelli.
 - 10 Straszheim (1981, Table 8). It is not clear whether this is income as of 1978 or at a date closer to the start of the program in 1974. In any case, as of 1978 the mean income of recipients was roughly \$4,500 at the two sites.
 - 11 Minuk and Davidson (1981, p. 9). Eligibles were taken as the number of singles and couples (25,746) below the SAFER income cut-off, determined from Manitoba Department of Finance data minus 14,000 estimated to live in subsidized housing or personal care homes.
 - 12 It is likely that the Manitoba rate is lower than the BC rate even when the definition of 'eligible' used for British Columbia is extended to include those who qualify by income but not by rent. The ratio of elderly recipients to 1976 renting households with head age 65 or over is 24 per cent for British Columbia (participants as of December 1980), while for Manitoba it is 11 per cent (participants as of December 1980). For New Brunswick it is also 11 per cent (participants as of November 1980). Denominator is from 1976 *Census*, Volume 3, Table 13.
 - 13 To be precise, the Property Tax Credit for elderly renters for the year 1980 was 20 per cent of rent, if 20 per cent of rent was less than \$325; otherwise it was \$525 minus 1 per cent of net household income to a minimum of \$325 (information from Jim Zamprelli). See also Stevens and Hum (1980).
 - 14 Three hundred people were 'randomly selected' from people to whom SAFER applications had been mailed but who never submitted applications; of these 185 were contacted (Manitoba Housing and Renewal Corporation, 1981).
 - 15 Also more important than low benefit was 'objected to participating in a transfer program' (Straszheim, 1981, Table 4).
 - 16 According to Claudia Barnett the number not qualifying because of this requirement is 'very small,' despite inspection of every unit.
 - 17 This explanation cannot be pushed too far. In the EHAP 'Administrative Agency' experiments, administration of the housing allowance was handled by established local agencies; housing standards were considered to be less stringent than in the other EHAP experiments and participation among enrollees rate was the highest. Despite this, at Administrative Agency sites the median percentage of recipients meeting housing requirements at enrolment was less than 50 (Cronin, 1981a).
 - 18 This mobility rate is computed for the urbanized core of CMAs, not for all elderly renting households, but while this may appear to be a problem, the concentration of recipients in CMAs (see Table 18 below) indicates that it is not.
 - 19 There is some downward bias in the mobility rate estimates in Table 15 because, where recipients have been in the program less than six months, moves made in the six-month period before achieving recipient status are omitted. A severe bias is unlikely for elderly recipients because only a few recipients at the end of six months

entered less than six months earlier, except in Manitoba in the first half of 1980, and in that case a bias is reduced by the small probability that there were many moves in the cold winter months. The bias for family recipients is greater than that for elderly, however.

A slightly different source of bias is more serious. Moves induced by the housing allowance but occurring before the movers became recipients are omitted. In a survey of 328 elderly SAFER recipients, 3.5 per cent replied that they had moved in anticipation of benefits (Minuk and Davidson, 1981, p. 43). Taken at face value, this indicates a small but noticeable impact of SAFER. It is not consistent, however, with the adjustment pattern estimated by Hanushek and Quigley (1979) because it implies that virtually all adjustment occurred within a few months. (Did respondents misunderstand 'in anticipation of?') Probably also some of the moves 'in anticipation' were recorded as moves after the receipt of SAFER because they were reported after the date of the cheque computer run.

Similar data reported late in 1982, if taken at face value, indicate a very substantial response of family recipients. Of a sample of 128 family recipients, 'slightly less than $\frac{1}{2}$... stated that they had moved in anticipation of their benefits, i.e. prior to the arrival of their first cheque' (Minuk, 1982, p. 53). Again, however, this claim is not consistent with the evidence on adjustment time from Hanushek and Quigley (1979). For further discussion relevant to this issue see note 42, below.

- 20 This is the mean of Hanushek and Quigley's Phoenix and Pittsburgh estimates (1979, Table 5). Their adjustment parameters refer to the proportion of households that do adjust (by moving or upgrading) times the completeness of adjustment of those households, rather than to the proportion of households that move. They assume elsewhere in their study that movers are in equilibrium, and so it is consistent with the spirit of their model to use their parameters to refer to actual moves as a proportion of moves required for equilibrium.
- 21 In EHAP, allowance-induced moves for households active two years after enrolment were 0.052 for Pittsburgh (not significant at the 0.10 level) and 0.096 for Phoenix (significant at the 0.01 level) (Rossi, 1981, Table 2). These effects refer to all allowance plans; for the percentage-of-rent plan alone, the effects were slightly greater.
- 22 This finding must be regarded as very tentative given the data problems. Not only is there much less information for families than for elderly recipients, but SHU data for Winnipeg families are sharply at variance with the Canada SHU data shown here. For Winnipeg, the overall mobility rate is 35.4 per cent (7.9 per cent estimated standard error), for single-parent families 31.8 per cent (12.8 per cent standard error), and for two-parent families 36.4 per cent (9.9 per cent standard error). Whether the great difference between the Canada and Winnipeg rates in 1974 is the consequence of sampling variation, some special factor operating in Winnipeg in 1974, or a difference reflecting a population difference between Winnipeg in 1981 and Canadian CMAs in 1974, is an open question.
- 23 It is *a priori* likely that the vacancy rate does have a substantial effect on the mobility of families, however, because they are higher-cost tenants than the elderly (see chapter 2) and so in a tight market are apt to find that many 'available' units are not available to them. This is corroborated by EHAP data. In Pittsburgh, where the market was quite tight, 44 per cent of white households reported encountering discrimination against children, while in Phoenix, where the market was loose, just 24 per cent did. Putting this in context, just 21 per cent of Pittsburgh black households encountered discrimination because of their race or ethnicity, and 15 per cent of Phoenix black households did (Cronin and Rasmussen, 1981, Table 5.8).
- 24 The analysis assumes that incomes (net of the allowance payment) and prices, most particularly P_H , remain unchanged. It is a special case of Hanushek and Quigley's

- model (1981). They allow price and income demand elasticities that are non-unitary (though still invariant with respect to income) and an induced response in P_H .
- 25 In March 1980, 20 per cent of single recipients had a rent of \$150 per month or less; 33 per cent had an income of \$350 per month or less (Manitoba SAFER Program Statistics, March 1980).
- 26 This is derived from $0.9 (150 - 0.275 \times 290)$, where 0.9 was the proportion of gap and 0.275 the contribution rate, for the lowest-income recipients in 1980.
- 27 If the price elasticity is unity, then in household equilibrium the rent net of the subsidy = $150 = R - 0.9 (R - 0.275Y) = 0.1R + 71.775$ for $Y = 290$. Thus $R = (150 - 71.775)/0.1 = 782.75$.
- 28 In March 1980, 40 per cent of singles paid rent of \$205 or more and 44 per cent had an income of \$400 or more (Manitoba SAFER Program Statistics, March 1980).
- 29 The 1980 SAFER payment formula was

$$A = \left\{ 0.9 - 0.4 \frac{(AY - 3500)}{4500} \right\} \left[R - (0.275 + \frac{0.025(AY - 3500)}{1500}) Y \right]$$

- for singles with an annual income between \$3,500 and \$5,000, where AY = annual income. For $R = 205$ and $Y = 400$, $A = 0.784(205 - 0.297 \times 400) = 67.71$.
- 30 $239.70 = 205 + 205/400 \times 67.71$.
- 31 Upgrading by the landlord would increase the housing services yielded by the dwelling unit and so would imply a percentage increase in rent greater than the percentage increase in the market price of housing service, so long as the price of the housing services for the unit remained at the market level. Fraudulent rent claims and the exercise of market power both imply increases in the price of housing services greater than the market increase. It would not be inconsistent with the data, but it is unlikely that allowance landlords upgraded but reduced the price of housing services (relative to the market price) or that landlords increased the price of housing service (relative to the market price) but reduced the housing service yielded by the units. Few economists believe that individual landlords have appreciable market power; Yinger (1981) cites evidence to challenge the orthodox view, but there is no evidence in the Winnipeg data of such market power.
- 32 Still another interpretation is that the data themselves are faulty. This investigator for a long time believed that this had to be the case. One reason was the occurrence of a substantial number of 'rent decreases' for non-movers in the tables from which the mean increases in Table 16 are computed. However, it was discovered that 'decreases' would be recorded when an overpayment for a previous month was calculated, but such 'decreases' would be offset by an associated 'increase' in the same month (information from Gisela Gielow, Manitoba SAFER office). In other words, for administrative convenience the computer file was used in an unexpected way, but this would not contaminate the data.
- Another problem was inconsistency between the data used for Table 16 and the information in SAFER and SAFFR Program Statistics monthly reports. This inconsistency, however, turned out to be the consequence of the inclusion in a monthly report only of rent changes for month t reported before the middle of month t and the inclusion of large dummy rent declines for recipients moving into various kinds of subsidized housing (information from Jim Zamprelli).
- Thus confidence in the data is upheld by the findings of investigation of data procedures. Further evidence of its validity is the consistency of the results in Table 16 for families and for the elderly, each of which use data from different files and for different periods of time.
- 33 Other reasons were: friends, relatives close by, 61 per cent; still cannot easily afford

higher rent, 50 per cent; physically too demanding to move, 50 per cent; uncertain where to move, 49 per cent; other reason, 13 per cent (Minuk and Davidson, 1981, p. 45). Of course, responses were affected by the structure of the question.

Recipients who had moved were not asked why they had moved. However, they were asked about the 'quality of their residence,' and 75 per cent replied that it improved while only 12 per cent said that it had worsened, corroborating the hypothesis that the movers were the beneficiaries of bargain housing rather than households reducing their housing consumption.

- 34 The rental component of the CPI divided by the all-items CPI fell by 8.6 per cent between January 1980 and August 1981, the period over which rent changes for the elderly are computed, and by 3.3 per cent January 1981–June 1982, the period over which the rent changes for families are computed.
- 35 It will be recalled that social assistance recipients are not eligible for SAFFR.
- 36 The results cited refer to the Toronto CMA. Results for the Montreal CMA are very similar in the case of the widowed, separated, and divorced, but the probabilities in the case of singles are much less in Montreal. The probabilities are computed from logit regressions; the permanent income coefficient for female widowed, separated, and divorced is significant at the 1 per cent level for Toronto and for Montreal, but for other regressions it is not. See Steele (1979, Tables 5.9, 5.10).
- 37 Watts and Skidmore regard the omission of household splitting from the EHAP research agenda as a gap of major importance (1981).
- 38 Zamprelli and Everett (1983). They are well aware of the incentives for misreporting. 'If for example an applicant applies and reports a common-law spouse, total income of both would be used to calculate benefits. However, if the same application reported the common-law spouse as a friend sharing the rental accommodation, a housing contribution of \$75 from the "friend" would be added to the applicant's income ... A sworn declaration to be signed in the presence of a Commissioner for Oaths has recently been implemented whereby applicants who have suspicious circumstances are required to declare household composition' (1983, pp. 33–4).
- 39 Of course it is possible that the remarkable unvarying proportion was produced by a process like this: a typical outlying recipient joined the program, then moved to Vancouver or Victoria, and later left the program, perhaps to enter a nursing home. If entrants into the program from outlying areas are matched by departures of recipients currently CMA dwellers but previously non-CMA dwellers, a constant proportion of recipients would be non-CMA. A scenario like this seems very unlikely, given the data for Manitoba. There, the proportion of elderly in Winnipeg was almost precisely the same three months after the start of the program – when total entrants greatly outweighed total departures – as it was a year and a half later.
- 40 This institutional fact in the case of new dwellings plays a role in the Urban Institute urban model: specifically, it uses in its model ' Q_m ... the minimum quantity of services which a new dwelling can contain and be in compliance with local building codes, etc.' (de Leeuw and Struyk, 1975, p. 117).
- 41 Of course it is possible that such an increase actually did occur in British Columbia and Manitoba but has been obscured by error in the data.
- 42 From EHAP there is evidence on the willingness to make a cash outlay in advance of receiving a housing allowance. In the demand experiment there was no open enrolment, i.e. eligibles did not initiate enrolment, but rather were selected and then personally interviewed. Thus they presumably were especially assured that they would receive a payment if they spent the money to qualify. Despite this, the average increase in rent for the minority of originally failing households who did take the trouble to qualify was just 26 per cent in Phoenix and a mere 10 per cent in Pittsburgh (Carlson and Heinberg, 1978, Table 5, p. 21). Further, in the supply experiment, where, as in Canada, there was open enrolment, 20 per cent of enrollees

in originally failing dwellings did not bother to qualify even though the vast majority of those originally failing who eventually did qualify did so by upgrading rather than moving (Leigh, 1981) and more than 90 per cent of upgraders spent less than \$100 (Carlson and Heinberg, 1978, Table 7, p. 26). Further, in the demand experiment, of those dissatisfied with their dwelling unit and their neighbourhood, 19 per cent in Phoenix and 23 per cent in Pittsburgh did not even bother to search for alternative accommodation; the major reason given for not searching was 'financial reasons' (Cronin and Rasmussen, 1981, Tables 5.3, 5.4). This result was surprising to EHAP researchers; Cronin and Rasmussen point out that no analysis of direct cash assistance 'up front' to offset moving costs was included in the experiment.

In sum, the evidence suggests that very few income-qualified but unit-disqualified households were willing to spend a non-trivial amount of money for qualification, even though, under GAP, qualification could result in a substantial decline in post-allowance monthly housing expenditure (see chapter 3). In ICPOR, changing from unqualified- to qualified-unit status or from a smaller to a larger subsidy always results in an increase in post-allowance monthly housing expenditure, because of the payment of less than 100 per cent of gap and the role in the formula of actual (see equation [3]) rent. *A fortiori*, it seems likely that very few ICPOR recipients increase housing expenditure before receiving the allowance.

- 43 Friedman and Weinberg have estimated price elasticities for low-income households of between -0.16 and 0.18 in Pittsburgh and between -0.21 and -0.23 in Phoenix (cited in Hanushek and Quigley [1981]). Income elasticities are given in the text above.
- 44 Number not receiving a cheque taken as number of files labelled 'inactive,' 'deleted,' or 'no reapplication.' An unknown number of these files relate to households that are not truly dropouts. None of the households in these files received an allowance cheque in the indicated month, however, so that at the very least 'dropouts' as given here includes those whose cash flow was interrupted.
- 45 This is the informed guess of Heidi Everett, Manitoba Housing and Renewal Corporation.
- 46 The administrative data are the proportion of recipients requiring a quarterly assessment (25 per cent) or a monthly assessment (10 per cent). In the latter category are recipients with no income. In the former category are those with inherently highly variable income, such as those who are UI beneficiaries.

5

Market effects of a housing allowance

I INTRODUCTION

Of critical importance to the assessment of a housing allowance program is its impact on the housing market. Probably the most widespread objection to housing allowances is the possibility that they increase neither the housing consumption nor the real income of the poor but merely increase the wealth of landlords. Housing allowances, it is supposed, may substantially increase the price of housing service. In fact, the evidence of chapter 4 indicates that the housing demand response to an ICPOR allowance is very small, and if this is generally true an ICPOR allowance can have *at most* only a small impact on the price of housing service, no matter what the supply conditions. But it is possible, although unlikely, that this very small demand impact will not generally hold in the short run, and it is possible and somewhat less unlikely that it will not generally hold true in the long run. For this reason this chapter examines the supply side of housing markets and assesses the possibilities of an increase in the price of housing service for a range of possible demand responses to a housing allowance, with special attention paid to the long-run effects.

To set a framework for the analysis, theoretical models of the housing market are outlined in section II. In the well-known Muth (1960) model, the price of housing service adjusts instantaneously when there are demand or supply shifts. In the Rydell (1979) model the price of housing service changes little but the vacancy rate adjusts. The theoretical section closes with a discussion of housing submarkets and the heterogeneity of housing.

Housing market theory is followed by housing market evidence. Non-experimental evidence (in section III) is from conventional econometric models and from three urban simulation models: two US

models, one from the National Bureau of Economic Research (NBERM) and one from the Urban Institute (UIM), and a Canadian version of UIM developed at Canada Mortgage and Housing Corporation (UICM). A critically important feature of these models is their delineation of numerous housing submarkets within an urban area.

The most important evidence on market effects comes from the housing allowance programs. Evidence from the Experimental Housing Allowance Program (EHAP) in the United States is assessed in section IV. Canadian evidence, from the housing allowance programs in British Columbia, Manitoba, and New Brunswick, is presented in section V. The chapter concludes, in section VI, with some caveats and also with an argument that one plausible effect of a housing allowance would be a shift *down* in the long-run supply curve of housing service in those submarkets where rents are close to the housing allowance thresholds.

II THEORETICAL MODELS

In this section a model of the housing market is set out that with modifications is used in analysing empirical evidence later in this chapter. This model shows the links between the market for housing service and the market for housing stock. It is essentially the one put forward by Muth (1960). Its central feature is the assumption that the price of housing service is sufficiently flexible to clear the housing service market but that there is, in general, disequilibrium in the housing stock market.¹

In this model of the housing service market it is assumed that housing service is a homogenous good. A unit of housing service is defined by the assumption that a dwelling unit renting for $2x$ dollars contains twice as many units of housing service as a dwelling unit renting for x dollars. It is also assumed that the ratio of capital to the other inputs used to produce housing service is constant. Thus there is a one-to-one relationship between the number of units of housing stock and the number of units of housing service, and a unit of housing service may be defined more precisely as the service produced by one base-period dollar of housing stock.

It is assumed that there is freedom of entry into the housing service industry. Thus, if price is greater than cost, new firms – new landlords – will enter, increasing the quantity of housing service and depressing its price. If price is less than cost, firms will leave the industry, decreasing the quantity of housing service offered and

pushing up the price. Thus in long-run equilibrium the price of housing service equals its cost.

In the derivation of the cost of housing service it is important to take account of the tax system and the existence of capital gains. The existence of the tax system means that in the long run it is the after-tax price of housing service that must equal its after-tax cost, that is:

$$(1-t)P_h = [(1-t)(r_m + t_p + m) - (1-0.5t) \frac{\dot{P}_{HN}}{P_{HN}}] P_H \quad (7)$$

where t is the income tax rate, P_h is the real price of housing service, r_m is the nominal mortgage interest rate, t_p is the property tax rate, m is the maintenance and operating cost rate,² $\dot{P}_{HN}/P_{HN}$ is the nominal rate of capital gain, and P_H is the real price of housing stock. All flows are annual. Equation (7) assumes that the after-tax opportunity cost of the landlord's equity is the after-tax mortgage rate. It assumes that the rate of capital gains tax is 50 per cent of the income tax rate and the tax is paid on accrued capital gains or equivalently that the tax is paid only on sale and the property is sold at the end of one year.³ Equation (7) also assumes that there is no capital cost allowance (CCA) or equivalently that a CCA is part of the income tax system but is not available as a deduction here. To the extent that a CCA is available the effect of this latter assumption partly offsets the effect of the final and most important assumption, that there are no cash flow constraints. Where property is not sold each year (7) cash flow will be negative, and it will be more negative the greater the nominal rate of capital gain. A requirement that cash flow be positive would very substantially increase P_h in times of high inflation and accordingly of high values for r_m and $\dot{P}_{HN}/P_{HN}$.

From (7) is derived the price of housing service:

$$P_h = [(r_m + t_p + m) - \frac{(1-0.5t)}{(1-t)} \frac{\dot{P}_{HN}}{P_{HN}}] P_H \quad (8)$$

This expression says that in long-run equilibrium the price of housing service relative to the price of housing stock is greater, the greater is the mortgage rate plus the property tax rate plus the maintenance cost rate, and it is smaller, the greater is the rate of capital gain. All these rates are expected rates, although it is consistent with rational expect-

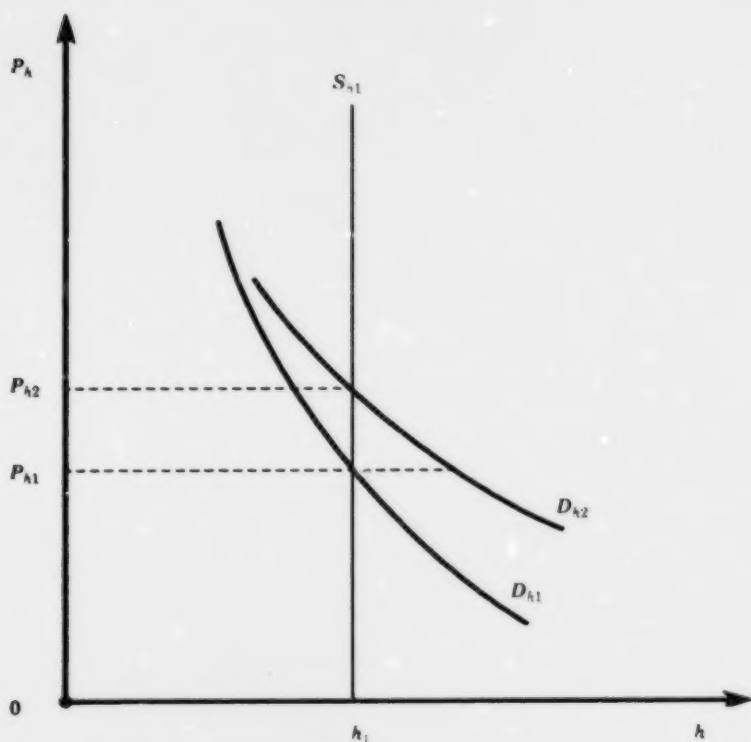
tations to assume that expected rates are equal to actual rates. The rational expectations hypothesis is probably least plausible in the case of the rate of capital gain.⁴ This is of some importance because the rate of capital gain is the most volatile element of the cost of housing service.

It can be seen from (8) that in long-run equilibrium the price of housing service is proportional to the price of housing stock. Following Muth (1960), Fallis (1980), and others (King, 1981), it is assumed that the long-run price of housing stock is the price of newly built housing stock, and that in the long run the price of housing stock is unaffected by the quantity supplied.⁵ This assumption is acceptable so long as there is freedom of entry into the building industry and so long as the wages of construction labour and the prices of building materials and the price of land are unaffected by the amount of housing stock supplied. The most troublesome aspect of this is the price of land. In long-run equilibrium, land at the fringe of cities is plausibly in perfectly elastic supply at its agricultural value,⁶ but housing is such an important user of land within cities that it is not reasonable to assume that land is in perfectly elastic supply at, say, its value as an industrial or commercial site. The existence of zoning laws that segregate use emphasizes this point.

Now to return to the housing service market. It is assumed that the demand for housing service is responsive to the price of housing service. It is assumed also that the supply of housing service is fixed, that is, that the supply of housing service is perfectly inelastic with respect to price; thus the model relates to the very short run. This model is shown in Figure 4(a). D_{h1} is the initial housing service demand curve; S_{h1} is the initial housing service supply curve. The quantity of housing service is $h1$, and the equilibrium price is P_{h1} . There is no excess supply of housing service – there are no vacant dwelling units.

In Figure 4(b) the housing stock model is shown. The scale of its price axis is chosen so that the price of housing stock is the same distance from the origin as is the associated (given by (8)) equilibrium price of housing service on its axis in Figure 4(a). D_{H1} is the housing stock demand curve corresponding to D_{h1} , assuming that (8) holds. Thus for the price of housing stock P_{H1} the quantity of housing stock demanded is $H1$, the amount that yields housing service $h1$. The assumption that the price of housing stock is the price of newly produced housing stock and that this new construction supply is

FIGURE 4a

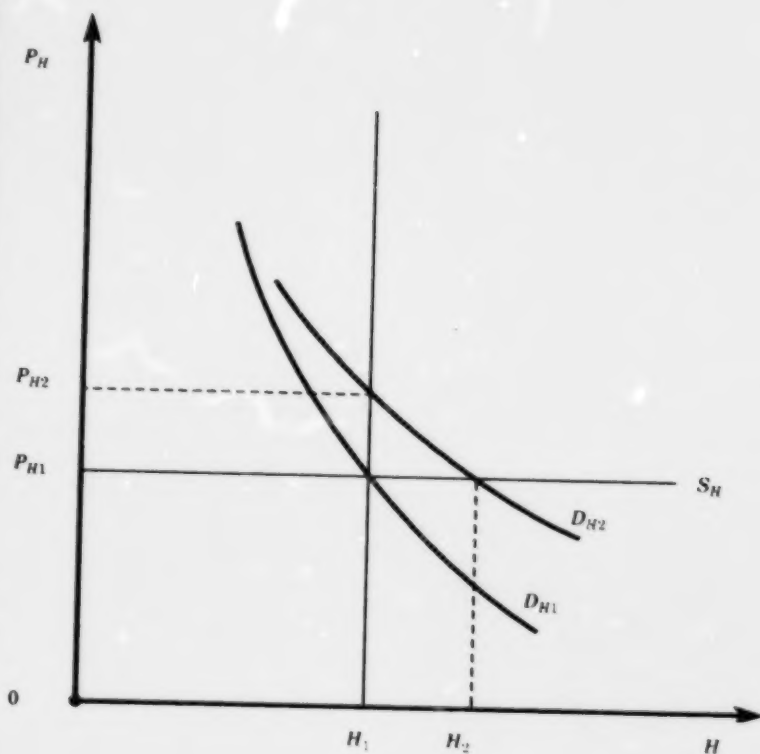


perfectly elastic is represented by the supply curve S_H . It can be seen here that the housing stock market is in long-run equilibrium because P_{H1} , the new additions price, is also the price implied by the equilibrium housing service price, P_{h1} .

The response to disequilibrium

The relation between these markets can be properly understood only if

FIGURE 4b



the response to disequilibrium is examined. Suppose that disequilibrium occurs because the demand curve for housing service shifts to the right. This shift might be caused by the implementation of a housing allowance scheme. If the housing allowance scheme is of the ICPOR type, at least part of the demand curve might be expected to become more elastic than previously because of the price subsidy for marginal amounts of housing service up to a quantity per recipient household of R^*/P_A , a subsidy of 75 per cent in the case of BC SAFER.

The new demand curve is shown in Figure 4(a) as D_{h2} . (A shift of the size indicated here is much greater than that indicated by the evidence in chapter 4. A zero shift would be much more plausible. The size of the shift here is thus very implausible for the short run for parameters of the BC and Manitoba range. It is more reasonable for the long run.) It is assumed that rents are flexible, and so the price of housing service rises to clear the market at P_{h2} .

It can be seen in the housing stock market that P_{H2} , the apparent long-run equilibrium demand price for the existing stock of housing $H1$, is greater than the new additions price, P_{H1} . But at any point of time there can be only one market price. That single price must be within the range P_{H1} and P_{H2} , assuming rational expectations. Its precise value will depend on the speed of response of the housing construction industry. If the construction industry supplied new additions equal to $H2 - H1$ within two years, rents within two years will fall back sufficiently to depress P_h to its original level, P_{h1} .

It can now be seen why P_{H2} was labelled the *apparent* long-run demand price for the stock $H1$. When the price of housing service is P_{h2} , the associated price of housing stock is P_{H2} only if P_{h2} , the (real) price of housing, is expected to persist. But in this model P_{h2} cannot persist: with the supply of new additions perfectly elastic at P_{H2} , new housing stock will be added to the market until there is a sufficient increase in housing service to depress the price of housing service back down to P_{h1} . And thus real rent (and so the real price of housing service) will fall to its original level within two years. Thus the demand price in the housing stock market is just P_{H1} plus the discounted value of the two-year flow $P_{h2} - P_{h1}$.

It can be seen that this model predicts that a housing allowance would result in an increase in rents in the short run, followed by a fall back to their original level in the long run.

Modification I: allowing for vacancies

A major respect in which this model badly captures reality is in its treatment of vacancies. It assumes that rents are perfectly flexible so that the market is always cleared: there are never any vacancies. In actuality, vacancies are almost always present and the vacancy rate fluctuates greatly. The extent of the fluctuation is indicated by some recent data: the Winnipeg vacancy rate was 5.6 per cent in 1964, 1.4 per cent in 1976, and 5.1 per cent in 1980; for Montreal it was 8.2 per

cent in 1970 and 1.3 per cent in 1976; for Saskatoon it was 16.9 per cent in 1971 and 1.5 per cent in 1974.⁷

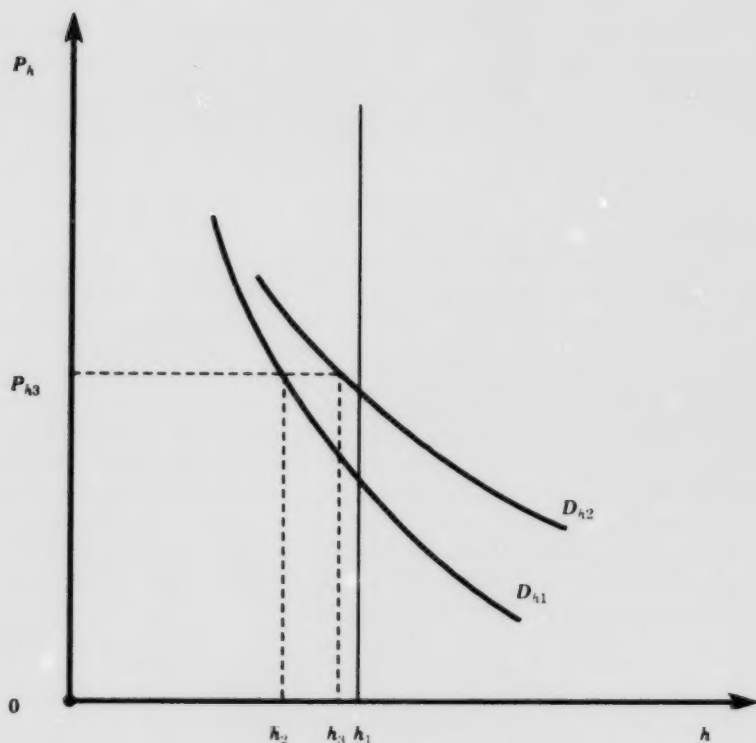
How does the possible existence of vacancies affect the model? One possible way is indicated in Figure 5, where the housing service market is depicted assuming that the demand for housing service and the supply of housing service are the same as that shown in Figure 4(a) but that vacancies exist in equilibrium.⁸ Thus the price of housing service is P_{h3} , which is higher than P_{h1} . Assume also that the response of suppliers to an increase in demand is a quantity response rather than a price response. Specifically, assume that they allow their vacancy rate to fall. Now suppose the demand for housing services increases to D_{h2} . Then the market response to this is merely a reduction in vacancies from $(h1-h2)$ to $(h1-h3)$. This in turn increases the profitability of the housing stock and so provides an incentive for new construction. This new construction, when completed, tends to bring about a return to the equilibrium vacancy rate.

This modified model predicts that a housing allowance would result in no increase in rents in the short run but in a reduction in housing choice, followed by return to the original level of choice, in the long run. This modified model will be referred to as the Rydell model because it is akin to one put forward by Rydell (1979) except that in his model a demand increase would result in a slight increase in rents as well as a fall in vacancies.

The assumptions that vacancies exist in equilibrium⁹ and that a change in the vacancy rate is the market response to disequilibrium bear further examination. *Prima facie*, while it seems unreasonable to assume that all the adjustment to disequilibrium in the housing market occurs through changes in the vacancy rate, probably a large part occurs in this manner. By analogy with the labour market, there may exist a vacancy-rent trade-off curve for suppliers of dwelling unit service.

Why may it be profit-maximizing not to decrease rents in the presence of vacancies? Rydell suggests that the rental housing market may be characterized as one of monopolistic competition so that the demand for a particular landlord's units is far from perfectly elastic at the average market rent. Alternatively, the market may be purely competitive but constrained by the prevalence of medium-term contracts, implicit and explicit. If a landlord reduces the rent on his unit he is likely to be committed to rent at this lower level for at least a year. This will certainly be the case if he signs a year's lease. In

FIGURE 5



Ontario a reduction in rent in any month may affect the rent of a unit for much longer than a year, the outcome of the rule that landlords of units covered by rent review have the right to increase the rent only once a year by 6 per cent of the existing rent. The permitted increase may be greater than this only if costs have increased by more than this or if there is a less-than-regulated return to equity calculated on a cash flow basis (see Arnott, 1981). The long-term cost of a one-year

rent decrease is exacerbated if rent review rules require the same rent to be charged for all similar dwelling units in a building. In a regime without regulations, it is also possible that reducing the rent for one dwelling unit may depress rents of similar units in the same building. Some of these units will be vacated in later months, and the rent these command will tend to be reduced if prospective tenants are influenced in their assessment of the amount of housing service yielded in a unit by the rent being paid for similar, occupied units in the same building.

A second reason for not decreasing rents in the presence of vacancies is the thinness of the housing market, particularly in the case of the less common types of units. In any month, only a small proportion of all tenants – 4 per cent on average if the annual turnover is 50 per cent – will be engaged in an active search for housing. The percentage with a particular set of location and housing bundle preferences may be very much smaller. Because of the cost of moving, sitting tenants will be attracted by a reduction in rent only if the reduction is very large. For this reason a rent reduction may have to be very large to eliminate a vacancy within a month. To highlight this point, it is useful to contrast housing service with milk. In the case of milk the purchase decision is commonly made at least once a week, milk is a homogeneous good, and the cost of switching suppliers is very low. The market is very liquid. Any single supplier knows that a very small percentage drop in price will likely increase the quantity sold very quickly.

These arguments suggest that the cost of reducing rents sufficiently to eliminate short-run vacancies is very great. Whether or not reducing rents is profit-maximizing when vacancies exist depends then on expectations of future demand and supply. The longer excess supply is expected to persist, at current rents, the greater the return to a reduction in rents.

At the same time, if a housing market with substantial vacancies experiences an increase in demand it may not be profit-maximizing to increase rents immediately, even if the new level of demand is expected to persist or even if demand is expected to grow. This would be the case for rental units offering a bundle of housing and location characteristics that is widely available. Recently built two-bedroom apartments in suburban locations may be sufficiently plentiful that a general increase in demand might not affect their rent until long after vacancies are eliminated in rarer, older buildings close to the centre.

Modification II: allowing for housing submarkets

The Muth housing model assumes away an aspect of the housing market that is of critical importance for the analysis of housing allowances, by assuming that housing is a homogeneous good. This implies that the price of housing service responds uniformly to a shift in demand. It implies that an increase in demand induced by a housing allowance increases the rent of an old low-quality five-room apartment proportionately the same as the rent of a new luxury three-room apartment with twice the floor area.

For the analysis of the effects of housing allowances it is more appropriate to recognize the heterogeneity of housing and to characterize the housing market as a set of submarkets. For instance, there is one market for a low-structure-quality five-room apartment in a low-income neighbourhood five miles from the core of the urban area and another market for a high-structure-quality three-room apartment close to the core. In principle, each such market could be analysed by using a diagram like Figure 4. Of critical interest in the analysis is the size of the cross-elasticities connecting the submarkets. More concretely, suppose a housing allowance shifts the housing service curve to the right in a low-quality housing market, thus increasing rents and reducing vacancies. Will this in turn induce a substantial increase in supply through the conversion of housing stock from other submarkets? Will it also induce a substantial number of households to shift their demand to other housing submarkets? If the answer is yes, the price and availability effects of a housing allowance will be dissipated across many markets. If the answer is no, that is, if markets are highly separated, the benefits of a housing allowance will be importantly reduced by the accompanying rise in rents and reduction in vacancies; and ineligible households with incomes close to the eligible limit will tend to bear a substantial cost from a housing allowance program.

III NON-EXPERIMENTAL EVIDENCE

Important evidence on the market effects of a housing allowance comes from three large simulation models explicitly developed for the purpose of analysing housing allowances. They are the Urban Institute's Housing Market Model (UIM), a Canadian application of UIM (UICM), and the National Bureau of Economic Research's Urban Simulation Model (NBERM).¹⁰ All three models distinguish many

housing submarkets, differing from each other in location, size of dwelling unit, and other attributes such as type of dwelling structure and quality of structure. The demand side of these markets is represented by model households characterized by income, race, family type, and age in UIM (de Leeuw and Struyk, 1975) and by these and additional attributes in NBERM.¹¹ The supply side includes landlords of existing buildings and builders. The model solution gives rent for each dwelling unit, the number of dwelling units in each submarket, the number of new dwellings built, and the number of dwellings vacant or withdrawn from the market. The interaction of the maximizing behaviour of landlords, builders, and households determines the number of dwelling units in each submarket. Landlords determine the level of services to provide at the end of the period from a given dwelling unit existing at the beginning of the period and thus determine the submarket that it will be part of at the end of the period. The landlord's decision depends on household demand (and thus on the structure of prices for different bundles of housing service), the production function for housing services from existing dwellings, and input prices. Some of the parameters of these models take assumed values, and others are estimated using data from actual urban markets.

A major result of these models is that a housing allowance has very little impact on average market prices (Ozanne and Zais, 1981). The meaningfulness of this result is questionable, however. In UIM (de Leeuw and Struyk, 1975) and apparently also in NBERM (Ingram, Kain, and Ginn, 1972), the supply of new dwellings yielding a given level of housing service is *assumed* to be perfectly price elastic. Only the housing service produced from existing dwellings is less than perfectly elastic in supply. This means that in many markets the average price of housing service is precluded from rising very much in response to a housing allowance.

The simulation models all simulate the long run, not the short run. But the overall market response in the short run is apt to be of great policy importance. The Muth model suggests that the short-run response is apt to be a steep run-up in rents; the Rydell model suggests that vacancies will fall but rents will rise little. Empirical evidence is provided by de Leeuw and Ekanem (1973). They find that an increase in incomes results in some rise in rents in the short run, but not a steep rise. Further, Smith's evidence (1974) on the relation of rents and vacancy rates in Canadian cities is consistent with the hypothesis that a demand increase reduces the vacancy rate and that this reduced

vacancy rate in turn increases rents only slowly and slightly. Thus for Toronto, Smith's estimates imply that an increase in the vacancy rate of 2 percentage points would increase nominal rents by only 1.2 per cent in the current year and 0.6 per cent in the following year. Taken together, this evidence suggests that the true model is closer to the Rydell model than to the Muth model.

The simulation evidence for submarkets

More interesting and meaningful results from the simulation models relate to the effects of a housing allowance on the pattern of rents among submarkets. All models find that housing allowances substantially change the pattern of the prices of housing service. In NBERM, which more than UIM allows prices to vary among dwellings, a housing allowance for which at least 25 per cent of households are eligible results in price increases of more than 10 per cent for about 20 per cent of dwellings. At the same time, about 20 per cent of dwellings experience a fall in price of more than 10 per cent. The price decreases occur in the below-standard-quality segment of the housing market and take place to a substantial extent because the housing allowances simulated in NBERM and UIM are of the EHAP gap type with a minimum housing standard required. They imply that some low-income households that do not choose to participate in an allowance program or that have an income just above the eligible limit would none the less benefit from the program because of the reduction in the price of below-standard housing.

In UIM, in cities with a low proportion of minority-race households, the increase in the price of housing service for participants ranges from 0 to 31 per cent (de Leeuw and Struyk, 1975, Table 23), with the high increase occurring in the slow-growth city under an inelastic supply assumption. It is enlightening to examine the difference in market response between low-growth cities and high-growth cities. First, an insightful and important assumption in UIM is that, because of zoning rules and other factors, only dwellings yielding more than some minimum level of housing services may be provided by new construction. Dwellings providing less than this must be part of the ten-year-old or older stock. In slowly growing cities such dwellings are in relatively great supply, and so their housing service price is less than the housing service price in new dwellings. In fast-growing cities this discount does not exist, and indeed the housing service price of such dwellings may be at a small premium.¹² Thus a housing allowance

introduced into a fast-growth city increases the price of housing services in low-service dwellings very little because *initially* it is high and close to the price of new housing service (and the latter, by assumption, is unaffected by demand). For the opposite reason in slow-growth cities prices of low-service dwellings increase substantially.

Clayton and Associates (1981) have used UICM to simulate the effect of a SAFER-type housing allowance in several Canadian cities. In each case it is assumed, analogously to assumptions in UIM, that the allowance program starts in 1961. The model determines the induced increases in the prices of housing services ten years later. For a version of SAFER without a threshold rent and therefore yielding some of its benefits to middle-income households,¹³ the price of housing services to participants rises 3.9 per cent in Saskatoon, 14.4 to 17.0 per cent in the other fast-growth cities (Calgary, Vancouver, Quebec City, and Kitchener), and 28.6 per cent in the slow-growth city of Winnipeg (Clayton and Associates, 1981, Table 3.7). For a version of SAFER the same as this but with a threshold rent chosen so that it generates total costs one-half of the no-threshold-rent SAFER, the prices rise 3.8 per cent in Saskatoon, 16.3 to 23.5 per cent for the other fast-growth cities, and 33.7 per cent for Winnipeg (1981, Table 4.10). The higher price increases for the threshold-rent SAFER than for the no-threshold-rent SAFER are apparently the outcome of the increased concentration of allowance recipients in just a few housing submarkets. These price increases are higher than those induced by housing allowances in UIM, apparently the consequence of the 75 per cent marginal price subsidy in SAFER in combination with the assumed unitary price elasticity of demand.¹⁴

The price increases simulated to be induced by SAFER, especially in Winnipeg, are very great. Their importance may be put in perspective, however, by noting that in UIM (and accordingly in UICM) *any* demand increase results in a substantial price increase. In particular, in UIM an income maintenance program increases prices 12 per cent in slow-growth cities (de Leeuw and Struyk, 1975, Table 24).

IV EVIDENCE FROM EHAP

The urban simulation models use many strong assumptions. In UIM (and UICM) the price elasticity of demand for housing is assumed to be -1 ¹⁵ and the income elasticity of demand is assumed to be approximately 1.0.¹⁶ With weaker elasticities of demand the price response to a housing allowance would necessarily be much less. As for the other

side of the market, in UIM the price elasticity of supply of housing services from existing units for any particular city is not assumed but is determined by the data. The range of estimates is very wide however: 0.42 to 1.10 (de Leeuw and Struyk, 1975, Table 13, p. 94).¹⁷ Because of this unsatisfactorily wide range, the effect of a housing allowance in UIM is simulated for archetypal cities under the assumptions alternatively of a low elasticity of supply and a high elasticity, yielding inevitably a range of estimates of the effect of a housing allowance on prices that is unacceptably wide. Other evidence on market effects is badly needed.

The other evidence provided in the United States is that from the Experimental Housing Allowance Program supply experiment, conducted at two sites, Brown County, Wisconsin, and St Joseph County, Indiana, specifically to determine the market effects of a housing allowance. The critical difference between this and the demand experiment was the availability of the program to all households at the sites who passed the income and housing standards requirements. (In contrast, numbers at the demand experiment sites were deliberately kept small enough to ensure that there were no price effects.) The two supply experiment sites were chosen to represent very different types of markets. Green Bay and the rest of Brown County grew rapidly 1960-70 and had less than 2 per cent black households. South Bend, the central city of St Joseph County, declined in population 1960-70, the county as a whole declined after 1970, and 19 per cent of households were black or Latin (Barnett, 1979).

The finding of the supply experiment is that the housing allowance program had no detectable effect on the price of housing service, either in the short run or apparently in the long run (Barnett, 1979). Over approximately three years from the beginning of the experiment the average (real) price of housing service at both supply sites declined.¹⁸ This begs the question of whether factors other than the housing allowance program were affecting rents in both sites. Without the housing allowance program, it might be argued, real rents might have fallen even more than they did. Evidence against this hypothesis is the fact that nominal contract rents at the two supply sites rose somewhat less than in other cities in the same size and geographic area class (Barnett, 1979, Table 5).

Submarket effects

These data, however, are not highly relevant to the question of market effects because they relate to market-wide effects, rather than submarket effects, and the simulation models predict very little market-wide effect, but large effects in some submarkets. In Green Bay and South Bend, while middle- and upper-income renters went unscathed by rising rents, were low-income renters, whether or not participants in the housing allowance program, faced with a higher price of housing service? The best evidence that the answer to this question is no comes from central South Bend. Central South Bend is an area with low-quality dwellings and low-income inhabitants, one-third of whom are black. There is a presumption that the cross-elasticities between this market and others are low. During the first two years of the experiment, 27 per cent of renter households in this area enrolled in EHAP. Yet 'dwellings in the lowest tercile had an annual rate of increase that averaged about 6.4 percent, which is [only] slightly higher than the St Joseph County rate of 5.1 percent' (Barnett, 1979, p. 14).

Unfortunately, this evidence is still not precisely the evidence required, because of the nature of the housing allowance programs. It required recipients to pass a housing standards test. Thus the poorest dwellings would experience reduced demand, not increased demand. The lack of evidence on precisely those dwellings which, while of relatively low quality, would pass the housing standards test, is an important defect in Barnett's assessment.

Other evidence suggests that in the submarkets most affected by the housing allowance, the (real) price of housing service did not rise, or rose very little. Non-moving participants experienced rent increases, after an average of 10 to 12 months in the program, of only 3 per cent in Brown County and 1 per cent in St Joseph County in cases where the dwelling passed the initial standards test, and of 7 and 3 per cent where the dwelling failed (and so had to be repaired) (Barnett, 1979).

Low consumption response and vacancies

Why was the price response so low? The answer lies largely in the low demand response to the housing allowance. The income elasticity for

enrolled renters at the supply sites has been estimated at 0.25 by Mills and Sullivan (1981: non-allowance income estimate) and at 0.22 (Green Bay) and 0.15 (South Bend) by Mulford (Cronin, 1981b). These very low elasticities are not a fluke. The income elasticities estimated at the demand sites for recent movers in the control group by Hanushek and Quigley (1979) are 0.14 and 0.24.¹⁹ These are far below the income elasticities assumed in UIM and UICM. In addition, the absolute values of price elasticities estimated from EHAP are generally well below 0.5²⁰ and thus much less than the elasticities used in the simulation models.

While the demand response was very low, it was not zero. Thus, on the basis of the supply elasticities assumed in UIM, there should have been *some* response in price of housing service. Why was there none? Why was the supply apparently highly elastic in the short run? The answer seems to be that the Rydell model, not the Muth model, explains the response to disequilibrium in the housing markets at the two supply sites. At both sites landlords apparently did not respond, with rent increases, to the small increase in current demand resulting from the housing allowance but instead allowed vacancies to decline. It is consistent with the Rydell model that non-mover participants in Brown County with its relatively low vacancy rate²¹ experienced a slightly greater rent increase than did those in St Joseph County.

It is noteworthy that UIM, in a simulation that constrained housing consumption response to be like that actually experienced, tracked the price response in Brown County much better than in St Joseph County (Ozanne and Zais, 1981, pp. 226-7). This suggests that the supply elasticities from UIM and accordingly from UICM may be quite accurate for housing markets where the vacancy rate is not high.

V EVIDENCE FROM THE CANADIAN PROGRAMS

The US EHAP supply experiment provides evidence for the effects of a housing allowance in two small cities. The Canadian programs exist in much more diverse markets (see chapter 4). Sites include cities of greatly differing size, with housing of greatly varying quality and with greatly varying vacancy rates. Considered here are the housing allowance cities of Vancouver, Winnipeg, and Saint John.

Market-wide effects

What is the evidence from these cities on market-wide effects? First,

real rent has *fallen* in all three housing allowance cities in the years since baseline. And as Table 20 indicates, the patterns of nominal rent increase for the two years after baseline have been broadly similar to patterns elsewhere in Canada and especially to those elsewhere in the same geographic areas. Thus rents in Winnipeg rose by 5.8 per cent and 8.5 per cent respectively in the two years after baseline, and rents in Regina rose by 6.2 per cent and 8.1 per cent in the same two years. Rents in Saint John rose at remarkably similar rates to those in Halifax: 3.5 per cent and 4.2 per cent as compared to 3.5 per cent and 4.1 per cent. In addition, vacancy rates in Winnipeg and Saint John fell by about the same amount during the two-year period after baseline as they did elsewhere: 1.5 percentage points in Winnipeg as compared with 1.7 for Canada, 1.8 for Saint John, and 1.0 for Canada. Vancouver vacancy rates, however, tightened at a time when rates elsewhere rose, but rents in Vancouver rose less than elsewhere.

It is of course possible that factors other than the housing allowance program tended to dampen rents in housing allowance cities relative to other cities, at the same time as the housing allowance tended to drive up market rents so that the effect of the allowance is masked by the effects of other factors. But the remarkable similarity of the patterns suggests that this possibility is remote. In addition, the rent increases are so far below the rent review guideline increases that it appears that in these cities rent review had no effect on market rent.

Submarket effects

Market segmentation

The finding that overall market rents were unaffected by the housing allowance programs is of little interest: it is entirely expected from the simulation models and says little about the impact of an allowance program on the price of housing service in markets relevant to low-income renters. Of much more interest are the findings for submarkets. Fortuitously, several pieces of information suggest that Winnipeg, the allowance city where there are both family and elderly recipients, has a relatively highly segmented housing market. This evidence is of two types. There is, first, the crude static evidence shown in Table 21. Consider the percentage of census tracts with mean cash rent less than 85 per cent of mean cash rent for the CMA. If dwelling units with a given quantity of housing service were evenly distributed throughout the CMA and if there were no rent premium

TABLE 20
Market-wide supply response indicators

	Rental vacancy rate (percentages)		CPI rent increase (percentages)		
	Baseline t	Two years after baseline $(t+2)$	Year prior to baseline $[t-(t-1)]$	First year after baseline $[(t+1)-t]$	Second year after baseline $[(t+2)-(t+1)]$
$t = \text{July } 1977$					
Vancouver	1.6	0.9	6.4	3.2	3.6
Calgary	0.3	1.6	7.7	7.5	5.3
Toronto	1.2	1.2	5.9	4.9	4.3
Canada	1.5	3.0	6.2	5.2	4.2
$t = \text{January } 1980$					
Winnipeg	5.0	3.5	3.9	5.8	8.5
Regina	1.9	0.5	2.5	6.2	8.1
Canada	2.9	1.2	4.3	5.6	-
$t = \text{October } 1978$					
Saint John	5.4	3.6	2.7	3.5	4.2
Halifax	2.2	1.2	4.8	3.5	4.1
Canada	3.2	2.2	4.8	4.4	5.2

SOURCES:

Rental vacancy rate: vacancy rates for privately initiated structures of six units or over from *Canadian Housing Statistics*, various years. Vancouver, Calgary, Toronto, and Canada baseline rates are actually for April 1977; Winnipeg, Regina, and Canada rates are for October 1979; Saint John, Halifax, and Canada baseline rates are for October 1978.

CPI rent increase: increase in the consumer price index rental component from Statistics Canada's CANSIM.

TABLE 21
Indicators of market segmentation, selected CMAs

Socio-economic status index					
	1971 population (000s)	Percentage of census tracts with relatively low rent, 1971 ^a	Index at < 1 mile from centre	Deviation from index at < 1 mile from centre	
				2 to 3 miles from centre	5 to 9 miles from centre
<i>Housing allowance cities</i>					
Vancouver	1,082	24 (26)	49.5	+2.7	+4.7
Victoria	196	15 (29)	46.5	+7.6	+5.5
Winnipeg	540	31 (43)	41.0	+8.0	+12.2
Saint John	107	28 (24)	42.7	+2.1	+11.1
<i>Ontario CMAs</i>					
Toronto	2,628	29 (48)	46.3	+2.8	+8.2
London	286	32 (22)	47.3	+5.9	+0.6
Sudbury	155	18 (6)	50.9	-1.0	-1.6
Thunder Bay	112	28 (22)	47.5	-0.9	-1.1
Kitchener	227	13 (9)	44.9	+8.3	+1.1
Hamilton	499	20 (25)	43.3	+5.2	+10.9

^a Average cash rent < 0.85 average cash rent of CMA (in brackets percentage of central-city tracts with relatively low cash rent).

SOURCES:

1971 population: Gertler and Crowley, (1977, Tables 1.11 and 2.3).

Census tracts data: 1971 *Census of Canada*, Census tract bulletins.

Socio-economic status index: Balakrishnan and Jarvis, cited in Gertler and Crowley, (1976, p. 320).

for locations close to the city centre, there would be no census tracts with mean rent less than 85 per cent of the CMA rent. Yet in Winnipeg 31 per cent of all census tracts and 43 per cent of tracts in the central city are in this category, very much more than in Vancouver and in Victoria, British Columbia, somewhat more than in Saint John, and more than in most Ontario CMAs.

In Table 21 are also indicators of the socio-economic status of the population living at various distances from the centre. 'Socio-economic status' is defined in terms of current income and two variables strongly associated with permanent income - education and occupation. There is a stronger monotonic association of distance from the centre and status for Winnipeg than for any other city. In Winnipeg, households with low current and permanent income are more concentrated toward the centre than elsewhere.

More precisely relevant evidence on the extent of market segmentation is available. This is the increase in the price of housing service to housing allowance participants as predicted by the UICM model. This increase will be greater, the greater the degree of market segmentation, because segmentation helps confine the impact of the change in demand generated by a housing allowance to a few markets. Overspill to other submarkets would reduce the pressure on any one market and so would dampen the price increase for participants. Clayton and Associates (1981) found a far higher increase for participants in Winnipeg than in other cities it modelled (see section III, above).

Evidence on submarket effects

General evidence on the submarket effects of the housing allowance programs is virtually non-existent. There are, however, data for Winnipeg on vacancy rates by rent range after slightly more than two years of the elderly allowance program and slightly more than one year of the family program (Table 22). These show an almost monotonically declining vacancy rate as the rent range increases. One might have expected *a priori* that a housing allowance program would increase the vacancy rate among units with the lowest rent, because the housing allowance would induce low-income households to demand higher-quality housing. The very high vacancy rate for the lowest rent-range units is consistent with this expectation. However, one might also have expected units renting for about the threshold rent to experience an especially low vacancy rate because of the

TABLE 22
Vacancy rate by type by rent, April 1982

Rent	Type				
	Bachelor	1-bedroom	2-bedroom	3+ -bedroom	All
< \$150	12.6	10.2	0.0	0.0	11.0
\$150-\$200	7.9	3.2	3.1	0.0	5.1
\$201-\$250	2.9	2.3	3.7	14.3	2.6
\$251-\$300	0.6	2.0	1.3	5.0	1.7
\$301-\$350	2.3	1.5	0.7	1.9	1.3
\$351-\$400	0.0	1.4	1.0	0.5	1.1
All	4.4	2.2	1.4	1.7	2.1

NOTE: Rates are for buildings of six units or more.

SOURCE: CMHC field office, Winnipeg.

ICPOR price subsidy notch at that rent. In fact, the vacancy rate for the rent range \$251-\$300, a range within which threshold rent lies,²² is substantially greater than the vacancy rate for the next highest rent range. This is inconsistent with the hypothesis that the housing allowance exerts special pressure on the submarket that housing allowance recipients are especially likely to occupy. There is thus no evidence that participants of the Manitoba program - or, indeed, low-income non-participants - faced an increased price of housing service as a consequence of the program.²³

There is in addition the specific and important evidence from Manitoba (Table 17) on the change in rents of non-moving participants. Their rate of increase is less than the increase in the rental component of the consumer price index. Thus, apparently, the housing allowance program did not induce an increase in the price of housing service in the submarkets occupied by allowance participants. There are no similar data for Vancouver, Victoria, and Saint John, but the small change in the mean rents of participants over this period suggests that the Manitoba experience is not unique.

VI CONCLUSION

The evidence in this chapter suggests that the response of the price of housing service to housing allowance programs is so small as to be undetectable. This is true in the United States at the EHAP supply experiment sites. It is true also at Canadian sites of housing allow-

ance programs. These findings are contrary both to the predictions of the Muth housing market model and to the predictions of urban simulation models. The UICM model (Clayton and Associates, 1981) predicted a 33.7 per cent long-run increase in participants' price of housing service in Winnipeg for a housing allowance very similar to the one that is in place there. Yet the observed change after a year and a half is apparently a very slight *decrease*.

This evidence is important. It might have been argued by some that, in view of the evidence (see chapter 4) of a very low response in housing consumption, a discussion of market impact is superfluous. But the evidence in chapter 4 is blighted by the unavailability of true controls and of data that would have allowed multivariate analysis. Left open by chapter 4 is the important possibility that family recipients experiencing a drop in income were induced by the allowance to stay rather than to move to inferior housing. If this did occur it would increase demand pressure in above-minimal-quality housing submarkets. The evidence that this demand pressure, if it indeed existed, was not strong enough to induce rent increases for non-moving participants is thus important.

Some caveats must be added. First, the quality of the evidence for the long run is not as good as that for the short run. Only dubious inferences about the long run are possible on the basis of the average rent data for elderly BC recipients. Second, the quality of the evidence is not as good for initially tight markets – Vancouver and Victoria – as for an initially loose market – Winnipeg. Against this is the finding of the Urban Institute model that price effects are *greater* in loose markets than in tight ones. Third, there are doubts about the effects of rent control legislation. In Winnipeg, for almost all the period considered, there was no rent control. In Vancouver, however, there was rent control for all the period considered, although the guideline increase was sufficiently above the CPI rent increase to suggest that the guideline was not a binding constraint. Altogether, the evidence in this chapter does not rule out the possibility of some increases in the price of housing service in some submarkets in the long run. The possibility of a substantial increase in price in the short run or long run, even in tight markets, seems remote, however.

The usual predictions are turned on their head. Indeed, there is some basis for expecting a decline in the long run in the price of housing service to housing allowance participants. This would occur through the downward shift in the supply curve of housing service to

these recipients. In particular, tenants receiving an income supplement such as a housing allowance when their other income declines are less apt to move and more apt to pay their rent than they are in the absence of an allowance. The decline in landlords' turnover costs and bad debt costs will, in a competitive market, be passed on to tenants through lower rents.

NOTES

- 1 Two other stock flow housing models, those of Smith (1974) and Kalchbrenner (1972), assume, like Muth, that equilibrium always exists - in the market for housing service (Kalchbrenner) or in the market for dwelling units (Smith) - but, unlike the Muth model, these assume that the price of existing housing stock is directly proportional to the current price of housing service.
- 2 It is assumed that operating and maintenance inputs rise in price at the same rate as the price of housing stock.
- 3 It should be noted, however, that (7) assumes that transactions costs are zero, and this is highly objectionable for a one-year holding period. (In a somewhat similar expression, Dougherty and Van Order [1982] also ignore transactions costs.)
- 4 Diamond (1980) and Dougherty and Van Order (1982) assume that expected capital gain is a distributed lag of past capital gains.
- 5 For an alternative point of view see Smith (1974).
- 6 This is the standard assumption of the urban economics literature (see Henderson, 1977).
- 7 Rates are for dwelling units in structures containing six units or more. The source is *Canadian Housing Statistics*, issues for 1970, 1972, 1976, and 1981.
- 8 This changes (7) to

$$(1-t)(1-v)P_h = \left[((1-t)(r_m + t_p + m) - (1-0.5t) \frac{\dot{P}_{HM}}{P_{HM}}) \right] P_H$$

and (8) to

$$P_h = \frac{1}{1-v} P_H \left[(r_m + t_p + m) - \frac{(1-0.5t)}{(1-t)} \frac{\dot{P}_{HN}}{P_{HN}} \right],$$

where v refers to the vacancy rate.

- 9 A very interesting additional paper by Peter Rydell (1977) presents, apparently, evidence that differences between markets in vacancy rates at a point of time are capitalized as if they are expected to last forever. This implies different equilibrium vacancy rates in different markets. The strength of this evidence is reduced by the fact that for computing return to capital Rydell uses the assumption that the capital gain in each market depends largely on the increase in the consumer price index.
- 10 Much of the following description of these models, especially of NBERM, and their results is taken from Ozanne and Zais (1981).
- 11 It is odd, in view of the characteristics of a large proportion of housing allowance recipients, that the Detroit prototype of NBERM included only households with employed heads (Ingram, Kain, and Ginn, 1972).
- 12 The size of the premium is limited by the fact that households have the option of avoiding it by switching into the new dwellings market.

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- 13 For Vancouver, 23.2 per cent of benefits go to households in the third lowest income decile and 10.7 per cent to households in the fourth lowest or higher deciles (Clayton and Associates, 1981, Table 3.2).
- 14 For a gap-type allowance such as that used in UIM, the price increases were 0.6 per cent (Saakatoon), 6.1–12.8 per cent for the fast-growth cities, and 13.6 per cent for Winnipeg (Clayton and Associates, 1981, Table 2.2). These cannot be directly compared with the previously cited UIM results, however, because the UICM plan does not have a minimum housing standards requirement. Without this requirement the gap allowance is an income maintenance plan. Such a plan simulated in UIM results in a range of price increases of 5 to 12 per cent (de Leeuw and Struyk, 1975, Table 24), remarkably similar to the UICM results.
- 15 NBERM assumes price elasticities of -1.9 to -3.8 (Barnett, 1979).
- 16 The income elasticity is 1.0 with respect to Y_S , smoothed income, defined as $Y_S = Y^{0.6} \bar{Y}^{-0.4}$ where Y is the actual income of the household and $\bar{Y}$ is the mean income of all households of the same type (de Leeuw and Struyk, 1975 (2.6)). Thus if Y alone increased by 1.0 per cent, Y_S would increase by just 0.6 per cent and thus the elasticity with respect to Y is 0.6, not 1.0. A housing allowance program, however, is designed to aid most households of the same type, and so an increase in income through a housing allowance would be accompanied by an increase in $\bar{Y}$ of close to the same percentage as the increase in Y . Thus an increase of 1.0 per cent in Y would be associated with an increase of about 1.0 per cent in $\bar{Y}$ and so an increase in housing demand of about 1.0 per cent.
- 17 The range of estimates for the Canadian cities in UICM is much narrower: 0.51 to 0.78 (Clayton and Associates, 1981, Table II.8).
- 18 This is inferred from the fact that the US consumer price index rose by 33 per cent from January 1974 to September 1977 while the average annual rate of increase of gross rents in Brown County, January 1974 to March 1977, was 6.7 per cent and in St Joseph County, November 1974 to August 1976, was 5.0 per cent. The average annual increases in contract rents were much less: 4.4 per cent and 3.1 per cent, respectively. The rent data were obtained by linking data for dwellings from surveys taken at several points of time (Barnett, 1979).
- 19 There are a large number of other estimates from EHAP. They are generally less than 0.3 for renters and 0.5 for owners (King, 1981). These are consistent with income elasticities for Canadian low-income renters of 0.185 in Toronto for 1971 and 0.124 in Montreal for 1971 (Steele, 1979). These latter were estimated as the sum of the permanent and transitory income elasticities; for a convenient rationale of this summing procedure see King (1981, note 21).
- 20 These are reported in Cronin (1981b). Cronin's own price elasticity estimates are the notable outliers, ranging in absolute value up to 1.00.
- 21 By Canadian standards the vacancy rate even in Brown County was high. In view of the fact that the American investigators label the Brown County housing market 'tight' (e.g. Rydell, 1979), it may be that US vacancies include some units that are close to abandonment or that the data in some other way are fundamentally different from the Canadian data. Alternatively, see note 9 above.
- 22 As of the date of the data in Table 22 the threshold rent for families of two or less and for elderly couples was \$270 and for families of three was \$295.
- 23 It must be noted, however, that the data in Table 22 are for vacancy rate levels, not changes. If vacancy rate changes were higher in low- and high-rent ranges than in the threshold rent range, this would be convincing evidence that housing allowances tighten participants' housing submarkets.

6

Cost and distribution effects of alternative housing allowance plans

I INTRODUCTION

As previous chapters have shown, the housing consumption response to housing allowances has been very small and the price response virtually undetectable. This makes it both especially important and relatively easy to examine the distribution of housing allowances. Yet the distribution issue has received relatively little attention. In neither of the two major volumes assessing the findings of the Experimental Housing Allowance Program (Bradbury and Downs, 1981; Struyk and Bendick, Jr, 1981) is it given more than incidental attention. In this study distribution is given more attention: the distribution of alternative income-conditioned percentage-of-rent (ICPOR) plans is the major subject of this chapter.

The distribution with respect to household types is analysed. More importantly, so is the distribution with respect to income, and for this purpose it is argued that poverty-line-based income categories should be used, rather than dollar-income-based income categories. In a departure from the usual practice in analysis of transfer programs, this chapter also analyses the distribution with respect to the housing consumption of low-income households. Usually a transfer program is assessed with respect to its impact on the distribution of cash income, not additionally with respect to its impact on the distribution of a particular good.

The estimates in this chapter can be taken as applying directly only to the short run. This is the consequence of the assumption used here that the housing consumption response of recipients is zero. This assumption might appear extreme if it were not for the evidence of very little response in Canadian allowance programs (see chapter 4). It is also roughly consistent with the evidence from EHAP (King,

1981) and from the British rent allowance scheme (Trutko, Hetzel, and Yates, 1978).

What effect housing allowances will have on housing consumption in the long run is a different question. The long-run effect is almost certain to be greater than the short-run effect because of the costs that make the adjustment to a new long-run equilibrium demand very slow (Hanushek and Quigley, 1979) and because of the higher elasticity of demand of households with respect to permanent than to transitory income (Steele, 1979). This means that the distribution and cost of housing allowances in the long run will be different from that estimated here for the short run. The extent of the difference, however, will likely be very limited if in addition to a quite small consumption response there is also little price response. There has been no detectable price response during the time allowances have been in effect (chapter 5), and there will be little in the long run if, as is widely believed (King, 1981), the supply of housing is very elastic in the long run.

In section II the framework for analysing the distribution of housing allowances is justified. Next, estimates are discussed for two benchmark housing allowance plans for the year 1976. (Estimates for 1980, made using data available only after the chapter was written, are presented and discussed briefly in Appendix J.) The first plan (discussed in section III) is a constant contribution rate (CCR) plan with parameters like those in British Columbia's SAFER (except with substantially lower threshold rents). The second (section IV) is similar, except that it has a variable contribution rate (VCR), depending on household size. The CCR and VCR plans are further illuminated by examining, in section V, the trade-offs between parameters under a budget constraint. In some cases the trade-off is much closer to being linear than one might have expected. In general there is the somewhat uncomfortable result that parameter changes that make a plan more progressive with respect to income make it less attractive with respect to housing consumption. Section VI contains a summary and conclusion.

II THE FRAMEWORK FOR ANALYSIS

In this chapter various housing allowance plans are assessed using a uniform framework. Households are classified in various ways for this purpose. First, they are classified according to household type. Most of the plans in operation in this country are for a single type of house-

hold, the elderly, and it is useful to generate indicators for this group for comparative purposes. This classification is also useful because household types vary with respect to the work-disincentive effects of the tax-back implicit in the ICPOR housing allowance. Work disincentives, for instance, are of very little importance for the elderly. Household types vary also in the impact of other incentives - to move, to increase housing consumption, to reduce saving, to reallocate asset portfolios. These incentives are important for an assessment of the long-run impact of housing allowances.

The income classification

Of most analytic interest are classifications relating to the cost of attaining different levels of utility. Households are classified according to the relation of their income to a poverty line, the Statistics Canada low-income cut-off. To relate the categories used here to those often used elsewhere,¹ the dollar-income range associated with each category is given in Table 23 for three household sizes. It is useful to relate these categories to those used by Fallis in his recent study of housing programs (1980). He uses income classes for 1970 of 0 - \$1,999, \$2,000-\$3,999, \$4,000-\$5,999, \$6,000-\$7,999, and \$8,000+. Inflating the top of each range by the ratio of the 1976 low-income cut-off to the 1970 cut-off yields \$3,064, \$6,129, \$9,195, and \$12,260 respectively. It can be seen from Table 23 that \$3,064, the top of the lowest of these categories, is much more than half the poverty line used here for a one-person household, about half the poverty line for a two-person household, and much less than half the poverty line for a four-person household.

Why do these differences matter? Because different housing allowance plans will affect households of different sizes and types differently. Consider a housing allowance plan with benefits distributed heavily in favour of the elderly (who are largely one- and two-person households) as compared to one distributed heavily in favour of families. The first plan would tend to show a much higher benefit incidence for the lowest nominal income category than for the lowest of the categories used here. This is important for the assessment of vertical equity. Thus nominal income categories, relative to poverty-line-based categories favour plans for the elderly.

It is clear that a poverty-line-based income classification may yield substantially different results than a nominal-income-based classification. What is its rationale? It is simply the proposition that

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TABLE 23

The dollar income associated with poverty-line-based categories, 1976, in urban areas of 100,000 people or more

Household size	Income range (dollars) by poverty-line-based category			
	$Y < \frac{1}{3}P$	$\frac{1}{3}P \leq Y < P$	$P \leq Y < 2P$	$Y \geq 2P$
1 person	0-2,005	2,006-4,010	4,011-8,022	8,023 +
2 persons	0-2,906	2,907-5,813	5,814-11,628	11,629 +
4 persons	0-4,411	4,412-8,823	8,824-17,646	17,647 +

NOTE: P refers to poverty line; Y refers to gross income.

SOURCE: Statistics Canada, 1980. The poverty lines used here are 0.6 of the Statistics Canada low-income cut-off for areas of 500,000 people or more plus 0.4 of the cut-off for areas of 100,000 to 499,999 people.

nominal income is a badly distorted indicator of need. As the equivalence scale literature would express it, the minimum cost of attaining some welfare level varies according to the number and ages of the members of a household.² At the most elementary level a one-person household needs less food to survive than does a four-person household. A naive way of taking account of this point would be to use nominal income classes defined in per capita terms rather than in per family or household terms. One major difficulty with this is that it ignores the economies of scale underlying such adages as 'two can live as cheaply as one.' Housing is an obvious example of a commodity for which great consumption economies of scale exist.

The Engel model used by Statistics Canada to generate its low-income cut-offs (called here poverty lines) does take account of economies of scale. And equivalence scales computed from Statistics Canada's poverty lines are consistent with most recently estimated scales. The ratio of the Statistics Canada poverty line for three-person households to that for two-person households is 1.28, as compared with Deaton and Muellbauer's (1980) equivalence scale for two adults plus one child 5-16 years old, at low expenditure, of 1.30.³ This suggests that the poverty-line-based income classes used here are better indicators of relative need than nominal-income-based income classes.⁴

The housing consumption classifications

In this chapter, in a departure from usual practice, the distribution of housing allowances is assessed according to the housing consumption of low-income households as well as according to indicators of general need. Two housing classifications are used, one for each of two major

housing characteristics. Housing need according to the first characteristic, physical facilities, varies greatly by urbanization level (see chapter 2), presumably in large part because of the greater comprehensiveness and enforcement of housing regulations in larger urban areas.⁵ Dwellings are classified as primitive if they lack either cold running water or minimum toilet facilities (defined as flush toilet – private or shared – or chemical toilet). They are classed as inadequate if they are not primitive but lack central heating, hot running water, or private bath. They are classed as good if they have two of (two toilets, two baths, built in 1960 or later). Remaining dwellings are classified as adequate. The second major housing characteristic assessed is space, defined relative to the household occupying the dwelling unit. Households are classified as crowded if they have fewer than one bedroom for every two persons.⁶ They are defined as having adequate space if they are not crowded but have less than one bedroom per person. 'Good' requires one bedroom per person. 'Very good' requires more than 'good.'

Measures of distribution and incidence

For each classification there are measures of the distribution and incidence of the housing allowance. The number of recipients and the proportion of all renter households that are recipients give some guidance to the horizontal equity of a housing allowance plan. Other things being equal, the greater the proportion of households below the poverty line or living in primitive conditions that are allowance recipients, the more appealing the plan. Following and extending Fallis (1980), the mean payment and the ratio of this to income are given for recipients and for all households in each class. These measures of incidence are a guide to the vertical equity of the program. Consider a housing allowance plan that yielded a payment-to-income ratio of 1 per cent for all income classes. This would be a neutral program in the sense that it would leave the distribution of income unchanged among income classes. The more a plan deviates from this by making the ratio higher for low-income classes and lower for high-income classes, the more progressive it is.

The difference between the incidence of the program and the incidence of a program in which the payments are distributed neutrally is called the differential incidence of the program. The differential incidence approach to the analysis of the vertical equity of housing allowance plans is not explicitly used here, but it is an important

rationale for the measures used. A major advantage of the differential incidence approach is that it makes it possible to ignore the macro-economic effects of a program. More concretely, a housing allowance program that distributes \$100 million to low-income renters and is financed by an increase in the government deficit will surely have a substantial impact on aggregate demand and so on the distribution of income. If a housing allowance program is compared with a neutral alternative by using the differential incidence approach, this macro-economic effect can be ignored.⁷ In this chapter, of course, not only are macro effects ignored, but so also are micro effects and, in particular, the effect of a housing allowance on the housing choices of consumers; but this omission is probably of little consequence because of the indications that a housing allowance has little effect in housing choice.

It may have been noticed that so far the word 'benefit' has not been used to refer to the housing allowance payment. The housing allowance payment to a household cannot be identified as a benefit of the same dollar value because a housing allowance is a cash grant conditioned on both income and housing expenditure. This conditional aspect makes it less valuable than an unconditional grant of the same amount. Some households receiving an ICPOR, for instance, would prefer a smaller, unconditional cash grant because the housing allowance payment requires that they spend a certain percentage of their income on rent. For these households the benefit of the housing allowance payment is less than its dollar amount. Since for some households the housing allowance is worth less than its dollar amount and since for no households is it worth more, the average benefit from a housing allowance program is less than the average payment. The difference is probably slight, however, because the effect of a housing allowance on housing choice is probably slight.

III A CONSTANT CONTRIBUTION RATE PLAN

The benchmark ICPOR housing allowance plan simulated here for 1976 (for 1980 see Appendix J) is a plan with parameters similar to the one currently in operation in British Columbia, except that threshold rent is set at the 33rd percentile rent for Ontario urban areas of 100,000 or more people (see discussion in Appendix H), and these are relatively lower than BC threshold rents. Payment under this plan is $A = 0.75 (R - 0.30Y)$, if $R \leq R^*$ and $R > 0.30Y$ and $A = 0.75 (R^* - 0.30Y)$, if $R > R^*$ and $R > 0.30Y$, where A is the payment, R is cash rent paid plus an allowance for heat if heat is not included in

rent,⁸ Y is gross household income, and R^* is \$125 for one-person households, \$165 for two-person households, \$187 for three- or four-person households, and \$195 for households of five or more persons. This plan is simulated for Ontario (Table 24). The plan is also simulated for Canada (Table 11) to provide a useful comparison and as supporting evidence, useful because the HIFE sample size for Canada is much greater than that for Ontario. The number of observations used for the Ontario estimates implies that the standard errors for some estimates in Table 24 are large (see chapter 2). The standard errors in Table 11 are much less.

The total cost of the plan in Ontario for all groups is \$80 million. Assuming a participation rate of 70 per cent – a much more plausible assumption than the 100 per cent assumption used in Table 24 – the cost is just \$56 million. One way to put this in context is to compare this to payments in 1976 under the Ontario property tax credit program. This is a housing allowance program in fact if not in name: a cash grant conditioned on income and on housing expenditure. The transfer cost of this program plus the sales tax credit program for the 1976 tax year was \$209 million for renters,⁹ more than three times the cost simulated here (assuming 70 per cent participation).

A comparison for all Canada is also illuminating. The plan simulated here for Canada – with the same threshold rents as used for Ontario – has a transfer cost, assuming 70 per cent participation, of \$146 million. Smith (1981b) estimates that in 1978 federal explicit and implicit subsidies to low-income housing (public housing, limited-dividend, and non-profit) totalled almost \$300 million, and federal and provincial subsidies together would be considerably greater than this. If eligibility for the housing allowance were confined to the elderly and to families (i.e. households with a child under 18 years old), the transfer cost on this basis would be \$84 million. Government subsidies to housing through other programs (in these years, chiefly the Assisted Home Ownership Plan and the Assisted Rental Plan) and tax expenditures for housing brought housing subsidies in total to much more than this (Smith, 1981b).

If the housing allowance program were universal for renters, i.e. if all household types were eligible, then non-elderly non-family ('other') households would receive a very substantial share of the payments – 41 per cent, as estimated in Table 24. Families in turn would receive a substantially greater share than the elderly, and single-parent families would receive more than two-parent ones. Families would receive

TABLE 24
The cost, distribution, and incidence of a CCR housing allowance by household type, by income, and by level of housing consumption,
Ontario 1976^a

	Number of recipients (000)	Cost (\$000 000)	Mean payment and incidence ^b			
			Recipients	All households	Renters	
	(%) ^b		$\bar{X}$ (\$)	$\bar{X}$ (\$)	$\bar{X}/\bar{Y}$	$\bar{X}/\bar{Y}$
Household type						
Elderly ^c	54.9	37.9	20.1	25.0	0.11	0.005
Family						0.019
Single-parent	28.3	45.3	15.2	18.9	0.12	0.014
Two-parent	24.7	11.3	12.0	14.9	0.10	0.031
Others	71.1	15.5	33.1	41.2	0.14	0.004
						0.006
Income class^d						
$Y < 1P$	37.9	96.6	31.2	38.8	0.48	0.302
$1P \leq Y < 2P$	99.9	75.3	43.3	53.8	0.11	0.453
$2P \leq Y < 3P$	41.2	15.6	5.9	7.4	0.03	0.044
						0.001
						0.003
Housing characteristics^e						
Space^f						
Crowded	6.9	31.1	3.5	4.3	0.11	0.013
Adequate	63.3	47.3	29.4	36.6	0.11	0.019
Good	81.6	69.8	34.6	43.0	0.13	0.035
Very good	26.9	80.9	12.9	16.1	0.16	0.077
						0.103
Physical facilities^g						
Primitive	1.9	66.3	0.8	1.0	0.18	0.015
Inadequate	9.0	64.6	3.9	4.9	0.14	0.021
Adequate	163.0	59.6	72.7	90.6	0.12	0.028
Good	4.8	30.4	2.8	3.5	0.15	0.052
						0.023

^a SAPR formula uses a percentage of gap of 75 per cent, contribution rate of 30 per cent, threshold rents of \$125 for one-person households, \$165 for two-person households, \$187 for three or four persons, \$195 for five persons or more; where rent does not include heat, an allowance for heat is added as given in note 8 to the text; 100 per cent participation of eligible households is assumed. Estimates use the Statistics Canada 1976 HIFE Micro Data File (1975 incomes).

^b Number of recipients as a percentage of rental households except, for the housing characteristics classifications, percentage of rental households with $Y < 1.5P$.

^c $\bar{X}$ is mean allowance, $\bar{Y}$ is mean income. For the housing characteristics, classifications 'all households' and 'renters' refer only to households with $Y < 1.5P$.

^d $1P$ is spouse $\geq$ age 65.

^e Y 1976 income per person.

^f Crowded is defined by 'crowded bedroom' in note 6 to the text. Adequate is not crowded, but < 1 bedroom per person, good is one bedroom per person, and very good is 1.5 bedrooms per person.

^g 'Primitive' dwellings have no running water or have flush or chemical toilet, 'inadequate' are not primitive but lack at least one of central heating, private bath, or hot running water. Dwellings with two of (two or more flush toilets, two or more baths, built in 1960 or later) are classified as good.

33.8 per cent of all payments in Ontario as against just 31.2 per cent in Canada as a whole, indicating that families, relative to the elderly and others, are more in need in Ontario than elsewhere in Canada. The impact of a housing allowance on the situation of single-parent families is striking. Over 45 per cent of single-parent renters would be recipients, the highest rate for any household type. The incidence of the payment over all households of this type is much higher than for other types: the mean payment-to-income ratio is 1.4 per cent as compared with 0.1 per cent for two-parent families. For recipient households, the payment-to-income rate varies rather little. It ranges from 10 per cent for two-parent families to 14 per cent for non-elderly non-family households.

The distribution of payments indicated here is heavily weighted in favour of families and against other households, compared to other estimates of an income-conditioned percentage-of-rent housing allowance. Ontario Ministry of Housing estimates for 1979 show 50 per cent of payments going to 'others,' as against 41 per cent here, and 24 per cent going to families, as against 34 per cent here.¹⁰ This sharply different distribution is the consequence of much higher threshold rents – especially for single-person households – than the ones used here. The effect of high threshold rents is also seen in the Canada Treasury Board estimates for its Plan D for 1976. These estimates too show a distribution much more weighted to 'others' and less to families than those estimated here.¹¹

Impact on the income distribution

The benchmark housing allowance is highly progressive. For Ontario, 39 per cent of payments go to households with incomes below half the poverty line; 93 per cent go to those below the poverty line. The payment for households below half the poverty line averages 48 per cent of income for those who are recipients and 30 per cent for all. The payment-to-income rate falls very steeply with income. The distribution and incidence for Canada are remarkably similar to those for Ontario. Precise comparisons are not possible (the two systems use different income classifications), but it is clear that the Treasury Board's Plan D distribution is substantially less progressive than the plan estimated here. The reason for this difference is not difficult to see. The Treasury Board plan has a relatively high threshold rent, and the higher the threshold rent, the greater the threshold income. The income at which the required contribution from income exceeds

the threshold rent, i.e. the income at which benefits are cut off, is \$5,000 here for singles, just 25 per cent more than the 1976 poverty line for areas of 100,000 people or more. For a four-person family, threshold income is \$7,480, just 85 per cent of the analogously specified poverty line.

The incidence of this benchmark housing allowance is highly progressive relative to existing housing programs in Ontario. The incidence of the benefits of public housing, entrepreneurial and non-profit programs, and rent review has been estimated by Fallis (1980). Public housing is the most strongly progressive. Yet among the recipients of public housing benefits, the benefit-to-income ratio falls by 0.245 from the lowest income class to the next income class.¹² These are roughly similar to the first two income classes here (see above), and the benefit-to-income ratio of the benchmark housing allowance falls much more between these two classes. Further, the participation rate in public housing rises by income class over the first three income classes, while for this housing allowance eligibility falls greatly with income. Of renter households with an income between one-half the poverty line and the poverty line, 75 per cent are eligible while an amazing 96 per cent of renters in the poorest class are. This reinforces the conclusion that a housing allowance is highly progressive relative to existing housing programs. There is one major caveat: the participation rate of eligibles in allowance programs is less than the 100 per cent assumed in Table 24, and thus the benefit pattern may be less progressive than Table 24 indicates.

Assistance to the worst-housed, best-housed?

Now let us turn to the problematic question of the distribution of the allowance according to the level of housing consumption. Are the worst-housed among the poor helped (where the poor are defined as households with an income at or below 1.5 times the poverty line)? The answer is a qualified yes: 66 per cent of renters with primitive physical facilities and 65 per cent with inadequate facilities, but only 31 per cent of those who are crowded are recipients. The relatively high contribution rate required to qualify for the housing allowance thus does not disqualify a substantial proportion of the poor living in inadequate housing. None the less these percentages are sufficiently small to put in question the use of a housing allowance to reduce the negative externalities of inadequate housing. Reinforcing this point are the low mean payments - \$64 and \$92, respectively - computed

over all poor households (renter and owner) in primitive and physically inadequate housing. These low payments are the outcome of the fact that most such housing is rural and owner-occupied (see chapter 2). Only a housing allowance program in which owner-occupiers are eligible could assist a large proportion of all households occupying physically inadequate housing.

Does the ICPOR housing allowance result in relatively high payments to the best-housed among the poor? Very clearly not, in the case of physical facilities. The mean payment over all poor households is only \$45 for those with good physical facilities, much less than the mean payment to those with poorer physical facilities. The answer is not so clear in the case of space. It is true that the mean payment per poor household with very good space is low - \$77 - but the mean payment in the second highest category is a high \$182. Further, the mean payment over all poor renter households in ascending order of space is \$157, \$219, \$296, and \$389 (computed from HIFE but not shown in Table 24). To make the space story more complicated, the mean income of poor renter households is \$7,800 for those in the crowded class and falls monotonically as space increases. The inverse relationship between space consumption and income holds - albeit somewhat less strongly - separately for families and the elderly.¹³ Households with relatively spacious accommodation get a relatively large amount from the housing allowance plan largely because they are relatively poor.

The space consumption pattern

It is worth considering further this curious inverse space consumption pattern. It seems plausible that it is related to transactions costs. Consider an 85-year-old woman. Ten years earlier she might have had a much higher real income because her non-government pension had not yet been seriously eroded by inflation or because her husband was still alive. At that time her housing consumption might have been in long-run equilibrium. With the decline in her real income - and, if a husband died, the size of her household - her housing consumption is out of equilibrium but monetary and psychic search and moving costs are so great as to induce her to stay. Consider also a single-parent mother with two children. A few months earlier her family income might have been much higher because her husband had not left. With the departure of her husband her income is lower and she has extra room. But she may find it difficult to move because of disruption in

her children's schooling, because she is not able to find a landlord willing to rent to a single-parent mother, or because in some other respect search and moving costs are great. If she believes her husband may return, the costs of changing accommodation are especially unlikely to make a move economic.

In these two cases in which housing consumption is out of equilibrium, there is a case for the view that despite lavish space consumption the households are in need. Probably the cost of achieving a given level of utility for these households is greater than for households living in less spacious accommodation. Their spending of a high proportion of income on rent is largely the outcome of the size of transactions costs in the housing market combined with a change in circumstances that is substantially exogenous and difficult to insure against.

A further defence of the payment pattern with respect to space has to do with the effects of building codes and other housing regulations. As was argued earlier, these regulations impose a welfare loss on some households because they reduce or eliminate the possibility of consuming housing bundles with poor structure quality and poor physical facilities. These are bundles disproportionately frequently chosen by the poor (see chapter 2). But the poor household with a strong preference for space would suffer a greater loss, other things being equal, than one with a low preference for space, because the effect of structure quality regulations on expenditure would likely be greater, the greater the number of rooms: a household that in an unconstrained market would choose a five-room shack would be hurt more by the regulations than one that would have chosen a two-room shack. Thus the regulations rationale for an ICPOR housing allowance justifies a greater cash transfer to poor households consuming more space than to poor households consuming less space.

Despite these defences of the payment pattern with respect to space, it is hard to escape the conclusion that it counts against the housing allowance estimated here. In the next section of this chapter it is seen that an alternative scheme, attractive on other grounds, has a much more progressive space pattern.

IV VARIABLE CONTRIBUTION RATE PLAN

In chapter 3 it was argued that there are both efficiency and *a priori* equity grounds for preferring a housing allowance with a contribution rate varying by household size. For this reason, an ICPOR with a VCR

is simulated in Tables 25 and 12. It uses a set of rates that is a stylized version of sets observed at the poverty line (see chapter 2). The set used is: 40 per cent for one-person households, 30 per cent for two-person households, 25 per cent for three, 22.5 per cent for four, and 20 per cent for five or more.

Not surprisingly, families – especially two-parent families – get a much bigger share under this plan than under the CCR plan. They, after all, typically are larger than elderly households. The share of two-parent families increases by more than ten percentage points to 25.5 per cent, and the share of single-parent families increases by a little less, while the share of the elderly and that of 'others' fall by at least 8 per cent. The percentage change in the number of recipients is also great: two-parent-family recipients increase by 65 per cent, while elderly household recipients decline by 22 per cent.

The incidence of this plan with respect to income is almost precisely the same as for the first plan. The allowance-to-income ratio for all households at less than half the poverty line is 0.302 for both plans. For the next higher class it is 0.044 and 0.045 respectively. The distribution of benefits among households in the lowest income class, however, is somewhat different from that in the flat-rate plan. A smaller proportion of households in this class receive the allowance, while those who do receive one receive a bigger one. Some poor one-person households, elderly and non-elderly, lose the allowance because they do not pay 40 per cent of their income on rent, and very poor families get a larger allowance. The benefits to the poorest are more concentrated than in the flat-rate plan.

The variable-rate plan is more progressive than the flat-rate plan with respect to housing space. The mean allowance to all poor crowded households is 90 per cent greater than under the flat-rate plan and that to all poor households with a very good amount of housing space is 21 per cent less. Essentially the variable-rate plan redistributes from single-person households to larger households. Single-person households by definition are never crowded, and so a plan reducing their benefits will, other things being equal, reduce benefits to the uncrowded.

The VCR ICPOR is less progressive than the benchmark plan with respect to physical facilities. It is still true, however, that the mean allowance payment for all poor households living in housing with good physical facilities, at \$81, is much below the mean payment for other poor households. Further, the difference between the two plans with

TABLE 25
The cost, distribution, and incidence of a variable-contribution-rate housing allowance by household type, by income, and by level of housing consumption, Ontario, 1976^a

	Number of recipients (000)	Cost (\$000,000)	Cost (%) ^b	Mean payment and incidence ^c				
				Recipients	All households	Renters		
				$\bar{X}$ (\$)	$\bar{X}/P$	$\bar{X}$ (\$)	$\bar{X}/P$	$\bar{X}/P$
<i>Household type</i>								
Elderly ^d	42.7	12.7	15.6	298	0.09	29	0.003	0.012
Family								
Single-parent	37.9	21.1	25.7	556	0.11	194	0.020	0.043
Two-parent	40.8	20.8	25.5	511	0.08	20	0.001	0.007
Others	57.8	27.2	33.2	470	0.15	30	0.002	0.005
<i>Income class^e</i>								
$Y < 1P$	36.2	31.2	38.2	862	0.49	483	0.302	0.454
$1P < Y < 2P$	105.7	43.9	53.7	416	0.10	177	0.045	0.083
$2P \leq Y < 3P$	37.3	6.6	8.1	177	0.02	10	0.001	0.003
<i>Housing characteristics (households with $Y < 1.5P$)</i>								
<i>Space^f</i>								
Crowded	13.7	6.6	8.0	478	0.08	203	0.024	0.038
Adequate	77.8	36.8	45.0	473	0.09	170	0.024	0.044
Good	65.2	28.3	34.6	434	0.13	149	0.033	0.063
Very good	22.4	10.2	12.4	454	0.15	61	0.016	0.081
<i>Physical facilities^g</i>								
Primitive	2.2	0.6	0.7	252	0.09	42	0.010	0.083
Inadequate	10.3	3.7	4.5	361	0.10	87	0.020	0.064
Adequate	157.2	72.5	88.6	461	0.11	149	0.028	0.052
Good	9.5	5.0	6.2	530	0.08	81	0.010	0.042

^a Housing allowance formula uses a percentage of gap of 75 per cent, contribution rate of 40 per cent for one-person households, 30 per cent for two-person households, 25 per cent for three-person households, 22.5 per cent for four-person households, and 20 per cent for five-or-more-person households, where rent does not include heat, an allowance for heat is added as given in note 8 to the text; threshold rents are as given in Table 24 note a; 100 per cent participation of eligible households is assumed. Estimates use the Statistics Canada 1976 HIFE Micro Data File (1975 incomes).

NOTE: Notes b to g as for Table 24.

respect to physical facilities is much less than the difference between the two plans with respect to space.

V THE EFFECTS OF ALTERNATIVE PARAMETERS

Parameter trade-offs under a budget constraint

Two ICPOR housing allowances have been estimated and assessed. But the parameters used in these plans were chosen quite arbitrarily, especially in the case of the first plan. Alternative parameters might be better. In this section the effect of changing each of the parameters is shown. In each case, when one parameter is changed, a second parameter is also changed, so that total payments made under the plan are kept constant. The distribution implications of each set of parameters are summarized by target efficiency indicators. For income classes this is the ratio of the payment-to-income ratio for the lowest class to that for the highest relevant class, with the ratio of the payment-to-income ratio for the lowest class to all other relevant classes in brackets. For housing consumption analogous ratios are shown, except that mean payment is used rather than its ratio to income.

Thus in the first line in Table 26, where all contribution rates are 1.3 times the contribution rates in Table 25, the increase in threshold rents required by government budget constraint is 37 per cent, implying that threshold income rises by 6 per cent. This plan is unambiguously more progressive than the benchmark VCR plan with respect to income, because the ratio of the payment-to-income ratio for all households less than one-half the poverty line to that for households between the poverty line and twice the poverty line is 482 as compared with 293; and the ratio for the poorest households relative to that for households between one-half the poverty line and twice the poverty line is 29 as compared with 23. But this plan is unambiguously less target efficient with respect to housing consumption. The mean payment to the crowded is just 1.95 of the mean payment to those with very good space, as compared with 3.33 in the benchmark, and is just 0.98 of the mean payment to all uncrowded households as compared with 1.54 for the benchmark.

A number of general observations may be made on this table. First, the threshold rent is a very important factor in the cost of an ICPOR. A 10 per cent increase in contribution rates allows only about a 10 per cent increase in threshold rents (see panel A), and the elasticity of the

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TABLE 26

Parameter trade-offs and relative incidence for housing allowance plans with a constant transfer cost, all household types, Ontario, 1976^a

A. Contribution rate and threshold rent varied in VCR plan so that cost is within 1 per cent of \$81.8 million

Contribution rate ^b	Threshold rent factor ^b	Threshold income factor ^b	Target efficiency		
			Level of housing consumption ^d		
			Income ^c	Space	Physical facilities
1.3	1.373	1.06	482 (29)	1.95 (0.98)	0.43 (0.48)
1.2	1.215	1.01	413 (27)	2.39 (1.13)	0.44 (0.50)
1.1	1.096	0.996	359 (25)	2.87 (1.34)	0.47 (0.51)
1.0	1.000	1.00	293 (23)	3.33 (1.54)	0.52 (0.54)
0.9	0.905	1.006	234 (21)	3.72 (1.70)	0.56 (0.59)
0.8	0.820	1.025	187 (20)	3.96 (1.77)	0.61 (0.63)

B. Contribution rate and threshold rent varied in CCR plan so that cost is within 1 per cent of \$80.4 million

Contribution rate	Threshold rent factor	Threshold income factor	Target efficiency		
			Level of housing consumption ^d		
			Income ^c	Space	Physical facilities
0.40	1.37	1.03	414 (29)	0.79 (0.47)	1.23 (0.60)
0.35	1.16	1.994	387 (26)	1.13 (0.66)	1.35 (0.60)
0.325	1.08	0.997	347 (25)	1.26 (0.73)	1.38 (0.60)
0.30	1.00	1.00	326 (23)	1.37 (0.79)	1.41 (0.62)
0.275	0.93	1.01	276 (22)	1.54 (0.88)	1.44 (0.65)
0.225	0.79	1.05	192 (20)	1.87 (1.01)	1.49 (0.70)

trade-off changes rather little over a wide range of contribution rates. Second, with respect to every parameter trade-off shown here, except one, the more progressive a plan is with respect to income, the less progressive it is with respect to housing consumption. Specifically, a high contribution rate plan with its associated higher R^* is the most

C. Percentage of gap and threshold rent varied in VCR plan so that cost is within 1 per cent of \$81.8 million

Percentage of gap	Threshold rent factor	Threshold income factor	Target efficiency		
			Level of housing consumption ^d		
			Income ^c	Space	Physical facilities
0.90	0.917	0.917	515 (26)	3.55 (1.67)	0.52 (0.57)
0.75	1.000	1.000	293 (23)	3.33 (1.54)	0.52 (0.54)
0.60	1.125	1.125	173 (20)	2.98 (1.35)	0.51 (0.52)
0.45	1.420	1.420	96 (18)	2.25 (1.04)	0.49 (0.50)

D. Percentage of gap and contribution rate varied in VCR plan so that cost is within 1 per cent of \$81.8 million

Percentage of gap	Threshold rent factor	Threshold income factor	Target efficiency		
			Level of housing consumption ^d		
			Income ^c	Space	Physical facilities
0.90	1.00	0.911	670 (28)	3.17 (1.50)	0.46 (0.52)
0.75	1.00	1.000	293 (23)	3.33 (1.54)	0.52 (0.54)
0.60	1.00	1.120	1142 (19)	3.57 (1.60)	0.55 (0.55)
0.45	1.00	1.316	66 (15)	3.85 (1.63)	0.54 (0.54)

- a For sources and procedures for basic data see Tables 24 and 25.
- b Contribution rate in panel A is actually the ratio of contribution rates here to benchmark (i.e. Table 24) contribution rates. Threshold rent factor is the ratio of threshold rents to benchmark threshold rents (given in Table 24). Threshold income factor is the ratio of threshold income to benchmark threshold income.
- c Figures on left refer to $\bar{A}/\bar{Y}$ for households with $Y < \frac{1}{2}P + \bar{A}/\bar{Y}$ for households with $P \leq Y < 2P$; figures in brackets: $\bar{A}/\bar{Y}$ for households with $Y < \frac{1}{2}P + \bar{A}/\bar{Y}$ for households with $\frac{1}{2}P \leq Y < 2P$. $\bar{A}$ is mean allowance over all households in the class; $\bar{Y}$ is mean income over all households in the class.
- d For space, figures on left refer to $\bar{A}$ for crowded households $\div \bar{A}$ for highest space class; figures in brackets, $\bar{A}$ for crowded $\div \bar{A}$ for all others. For physical facilities, figures on left refer to $\bar{A}$ for lowest class $\div \bar{A}$ for highest; figures in brackets, $\bar{A}$ for two lowest $\div \bar{A}$ for two highest. For both housing characteristics, $\bar{A}$ is mean allowance for all households in the relevant housing consumption class having $Y < 1.5P$.

effective in redistributing nominal income; a low contribution rate plan with its associated low R^* is the most effective in directing benefits to the relatively poorly housed. This is perhaps not surprising. In the language of the negative income tax literature the plans found

most progressive with respect to nominal income here are those with a high maximum support level (i.e. a high threshold rent) and an associated high tax-back rate. These plans are less effective at delivering benefits to the worst-housed because their high contribution rate requirement eliminates as recipients not only households that are lucky recipients of housing service bargains but also households that are consuming a low level of housing service.

It is important to notice that a high-contribution, high- R^* plan is not inevitably, regardless of housing expenditure behaviour, the most progressive plan with respect to income. The result here derives, first, from the fact that the lowest-income households are not, in large numbers, disqualified by a very high contribution rate requirement. More concretely, the highest contribution rate plan in panel A delivers benefits to single people only if they pay 52 per cent of their income in rent and to a single-parent mother and her child only if she pays 39 per cent of her income in rent, yet it is the most progressive with respect to income. Further, it must be true that there are not large numbers of middle-low-income households paying rents as high as the very high threshold rents (37 per cent above those in Table 24) of this plan.

A plan that is unambiguously more target-efficient than the benchmark VCR is the one with a formula using 90 per cent of gap and 92 per cent of benchmark threshold rent (see Table 26, panel C). Increasing the percentage of gap to 90 per cent increases both the tax-back rate and the 'support level' for those below the threshold rent, without increasing the severity of the contribution rate requirements, and so it is more progressive with respect to nominal income. At the same time, to keep the plan on the budget constraint, threshold rent is reduced, and so many of the better-housed (as well as higher-income) recipients are eliminated, making this plan deliver relatively more of its benefits to the worst-housed.

Relaxing the budget constraint and increasing threshold rent to the market median

The threshold rents used in the benchmark plans here are substantially lower than threshold rents in British Columbia's and Manitoba's housing allowance plans. What are the effects of increasing threshold rents to the level of median rents rather than 33rd percentile rents, while at the same time changing no other parameters (so that total payments rise)? First, threshold rents increase by 22 per cent for one-person households, 10 per cent for two-person households, 9 per cent

for three- or four-person households, and 12 per cent for those with five or more persons. Total payments increase by 31 per cent in the VCR plan; an increase in threshold rent not only increases payments to existing recipients with relatively high rent but also increases the number of recipients. VCR plan recipients increase overall by 12 per cent, but elderly recipients increase by 17 per cent. Payments to the elderly increase by an enormous 68 per cent. This plan is much less progressive with respect to income (see Table 27) and somewhat less progressive with respect to housing consumption than the benchmark plan.

The property tax grant for elderly renters and a VCR plan

Currently the elderly in Ontario receive a Property Tax Grant given by the following formula: $A = 0.2R$ if $R < \$208$, $A = 0.2 \times \$208$ if $R \geq \$208$, where A is property tax grant per month and R is rent. In Table 28, the cost of this is estimated after deflating the \$208 threshold rent to \$160 for comparability with other 1976 plans. The estimate is confined to renters only, and its distribution is compared with a VCR also confined to elderly renters and paying out the same total amount. A VCR filling this requirement is a 90 per cent of gap VCR plan with the same threshold rents as the benchmark but with contribution rates of 23.4 per cent for singles and 17.6 per cent for couples. As can be seen (Table 28) the mean property tax grant payment to recipients rises by income class – though not greatly, partly because of the capping effect of its maximum. It is far less progressive with respect to nominal income than the VCR plan. The VCR would pay to elderly renters at less than one-half the poverty line a monthly payment of \$56 (\$73 if inflated by 1.3), well over the average SAFER payment to BC recipients in 1978.

VI SUMMARY AND CONCLUSION

The major aim of this chapter has been to determine the likely cost and distribution, with respect to both income and housing consumption, of an ICPOR housing allowance implemented in Ontario. The distribution is critically important because of the evidence in earlier chapters that an ICPOR allowance has very little effect on housing consumption. Its nature, and the incidence of the allowance, are investigated here, using estimates of the mean payment and of the mean payment-to-income ratio for recipients and

TABLE 27
The cost, distribution, and target efficiency of a CCR and a VCR allowance using median rents as threshold rents, Ontario, 1976^a

A. Cost and distribution

	Number of recipients			Transfer cost		
	CCR (000)	VCR (000)	CCR (\$ million)	VCR (\$ million)	CCR (%)	VCR (%)
<i>Household type</i>						
Elderly	60.1	49.8	30.4	21.3	27.9	19.9
Family						
Single-parent	31.7	39.4	18.1	24.7	16.6	23.0
Two-parent	27.1	47.2	14.2	24.8	13.1	23.2
Others	85.0	65.0	46.1	36.3	42.4	33.9
<i>Income class^b</i>						
$Y < \frac{1}{4}P$	37.9	36.2	36.0	36.0	33.0	33.6
$\frac{1}{4}P \leq Y < P$	102.1	105.7	56.6	57.4	52.0	53.6
$P \leq Y < 2P$	63.9	59.6	16.2	13.7	14.9	12.8
<i>Level of housing consumption^c</i> <i>(households with $Y < 1.5P$)</i>						
Space						
Crowded	6.9	14.9	3.8	7.2	3.5	6.7
Adequate	69.5	85.7	37.8	46.9	35.0	43.8
Good	88.6	76.5	49.3	39.7	45.7	37.1
Very good	29.3	23.6	17.1	13.3	15.8	12.4
Physical facilities						
Primitive	1.9	2.2	1.2	0.9	1.1	0.9
Inadequate	9.0	10.3	4.7	4.6	4.4	4.3
Adequate	176.0	177.5	97.9	94.7	90.7	88.4
Good	7.4	10.8	4.1	6.8	3.8	6.4

TABLE 27 (continued)

B. Target efficiency^d

	Income	Level of housing consumption	
		Space	Physical facilities
CCR	137 (19.54)	1.14 (0.64)	1.39 (0.57)
VCR	163 (19.64)	2.78 (1.27)	0.63 (0.54)

^a Threshold rents are \$155 for one-person households, \$185 for two, \$207 for three or four, \$222 for five or more. Percentage of gap is 75 per cent. CCR plan has 30 per cent contribution rate; VCR has 40 per cent for one-person households, 30 per cent for two, 25 per cent for three, 22.5 per cent for four, 20 per cent for five or more.

^b Y is 1975 income, P is Statistics Canada 1975 revised low-income line.

^c For definition of housing characteristics see Table 24, notes f, g.

^d Target efficiencies are as defined in Table 26.

TABLE 28
A property-tax-grant type of housing allowance and ICPORs for elderly renters, Ontario, 1976

	Property-tax-grant- type of housing allowance ^a	VCR ICPOR housing allowance costing within 1 per cent of property- tax-grant-type allowance ^b		
		90 per cent of gap; contribution rate factor, 0.585	75 per cent of gap; contribution rate factor, 0.511	
Number of recipients	144,830	81,080	96,710	
Transfer cost (\$ million)	44.7	44.7	44.7	
Mean annual allowance per recipient household (mean allowance per household in brackets) ^c				
$Y < \frac{1}{3}P$				
$\frac{1}{3}P \leq Y < P$	237 (128)	654 (330)	545 (293)	
$P \leq Y < 2P$	275 (113)	668 (206)	512 (193)	
$Y \geq 2P$	318 (93)	427 (96)	432 (107)	
Target efficiency ^d	351 (104)	70 (1)	132 (5)	
Income				
Level of housing consumption households with $Y < 1.5P$	12.8 (3.5)	4,405 (5.9)	595 (5.3)	
Space	14.8 (3.6)	16.1 (4.0)	17.0 (4.2)	
Physical facilities	1.9 (0.5)	2.7 (0.6)	2.3 (0.6)	

^a Formula is $A = 0.2R$ if $R < 160$; $A = 0.2 \times 160$ if $R \geq 160$, where R is monthly rent.

^b Threshold rents as given in Table 25. Contribution rates are rates as given in Table 25 times contribution rate factor. Thus for the 90 per cent-of-gap ICPOR the contribution rate for singles is 23.4 per cent, and for couples, 17.55 per cent.

^c Y is 1975 income, P is Statistics Canada 1975 revised low-income line.

^d Computed as in Table 26, except that the income ratio 12.8 is $\bar{A}/\bar{Y}$ for $Y < \frac{1}{3}P$ divided by $\bar{A}/\bar{Y}$ for $Y \geq 2P$. Note that $\bar{A}$ is mean payment and $\bar{Y}$ is mean income for all households in the class in the case of income target efficiency rates, but only for households with $Y < 1.5P$ in the case of housing consumption.

for all households in various categories.

For 1976 a benchmark plan such as the BC SAFER, but with substantially lower threshold rents, would cost \$80 million, assuming 100 per cent participation. Seventy per cent is, however, an upper bound on the likely range of participation rates, and, assuming it, the cost would be \$56 million. If median rents were used as threshold rents, assuming 70 per cent participation, the cost would be \$76 million; on the same basis the cost in 1980 would be \$92 million (see Appendix I), indicating a rise of only 5 per cent annually from 1976. The cost of the benchmark plan is thus less than one-third the cost for renters of a quite similar but far less progressive income supplement program – the property and sales tax credit program in Ontario. It is also probably far less than the cost in Ontario of low-income housing programs: the cost of social housing alone, for Canada, has been estimated for 1978 at almost \$300 million, while the benchmark allowance plan estimated for Canada (Table II), assuming 70 per cent participation, would cost less than half this, and if confined to the elderly and families with children (the major social housing eligibles) would cost well under one-third.

The plans estimated here cover all types of renter households, and indeed 41 per cent of total payments go to those usually ineligible for social housing – non-elderly, non-family households. The elderly receive 25 per cent and families 34 per cent. More than half the payments to families go to single-parent families, and a very high proportion – 45 per cent – of all single-parent family renters are recipients.

The benchmark allowance plan is highly progressive with respect to nominal income, and an ICPOR is far more progressive than the property tax grant program for the elderly (Table 28) when the ICPOR is enriched so as to cost the same amount. Ninety-three per cent of payments go to those below the poverty line, hardly a surprising result in view of the fact that the relatively low threshold rents, in combination with the 30 per cent contribution rate, mean that threshold incomes are close to the poverty line. A result that is somewhat surprising, however, is the broad and deep coverage of the very poorest: 96 per cent of renters below one-half the poverty line are recipients, and the mean payment-to-income ratio for them is 0.48, more than four times the ratio for recipients with income between one-half the poverty line and the poverty line. Clearly the 30 per cent contribution rate requirement would not disqualify the very poorest. Further, the plan is far more progressive with respect to nominal income than is

public housing in Ontario. However, if those who do not take the trouble to apply for the plan are disproportionately frequently the very poorest, the plan will be less progressive than indicated here.

The 30 per cent contribution rate also does not disproportionately disqualify those in physically inadequate housing. A substantially higher percentage of low-income renters in such housing receive the allowance than of those in better housing. This pattern is reversed for space, but a VCR plan with contribution rates suggested in chapter 3 does deliver benefits to a high proportion of crowded low income renters – another reason to favour a VCR plan over a CCR plan.

The benchmark allowance plan and the VCR plan use, of course, just two parameter sets out of an infinite number. To assess the effects of other parameter values, this chapter estimates distributions for a wide range of alternative values. In each case changes are constrained by the requirement that total cost remain roughly constant. The results show that the cost of a plan is very sensitive to the size of threshold rents. Further, in general the higher the contribution rate and the threshold rent together, the more progressive the distribution of the plan with respect to income, and the less with respect to housing. The role of the contribution rate in increasing the income tax-back is much more important than its role in disqualifying some very poor households that do not pay a high proportion of their income on rent.

Does a housing allowance deliver assistance to the neediest and only to the neediest? The results of this chapter suggest that it does, although the answer cannot be certain. The reason for some hesitation is the quite sizeable benefit it delivers to those in spacious accommodation and in physically better-than-adequate housing. But households living in this accommodation may largely be those trapped by high transactions costs that prevent them from reducing their housing consumption – this certainly seems the case for those in very spacious accommodation who are, seemingly perversely, the very poorest of the poor. Further, most of the housing allowance benefit *does* go to low-income renter households living in accommodation that is just adequate or worse, spatially and structurally, despite the fact that its occupants are paying a high proportion of their income for it and despite the fact that households paying a relatively high rent, other things being equal, receive a relatively high allowance. Finally, as already noted, with respect to nominal income (income unadjusted for variation in housing price and taking no account of the forced

housing expenditure of those trapped by transactions costs), the housing allowance is highly progressive. Thus a housing allowance may not be the absolutely ideal vehicle for delivery of benefits to the neediest, but it is clearly not very far from it.

NOTES

- 1 Among studies using a dollar-income range are Canada Treasury Board (1979), Fallis (1980), and Heinberg (1971). Burke, Casey, and Doepner (1981) use income quintiles. Goodert and Goodman, Jr (1977), and Hum and Stevens (1980) use categories based on poverty line.
- 2 Or, as Krashinsky has expressed it in a different context: 'The greater the individual's need, the more income he requires to achieve a given level of utility' (1981, p. 31).
- 3 This is the scale estimated using the Barten model. The scale estimated using the Paris-Houthakker model is 1.82. Lazar and Michael (1980) have estimated an equivalence of just 1.21 for the United States, but this is estimated using a sample of households from all expenditure levels, not just low expenditure levels.
- 4 However, the classification is far from ideal. There is no adjustment for the different prices facing households in different areas (beyond that associated with different urbanization levels) or for differences in the age and sex composition of households.
- 5 In turn, the existence and level of enforcement of housing regulations (building codes, zoning by-laws, housing standards by-laws) may be a result of the size of an urban area. The central part of an urban area will tend to be more densely settled; the larger the urban areas and the more dense the settlement, the greater are the negative externalities associated with below-standard buildings. Fire hazard is an obvious example. Few municipalities have different standards for different parts of the urban area, and so the less densely settled parts of an urban area will be subject to rules fundamentally established to protect the more densely settled parts.
- 6 More precisely, a one-person household is never crowded. A household of two persons is crowded with less than one bedroom; three or four persons, less than two; five or six persons, less than three; seven or eight, less than four; nine or more, less than five. This is precisely the same as the EHAP standard (Allen, Fitts, and Glatt, 1981, p. 6, Table 8, p. 20).
- 7 For a much more complete discussion of this and related issues, see Fallis (1980).
- 8 The allowance for heat is \$8.03 for bachelor units, \$10.27 for one-bedroom units, \$18.63 for two, \$31.88 for three, and \$40.69 for four or more. These are the mean utility payments by unit size for Ontario, computed from the CMHC's Survey of Housing Units, 1974, updated to 1976 using the shelter component of the consumer price index.
- 9 This total also includes the political contribution tax credits of tax filers who claimed a combination of property, sales, and political contribution tax credits; the total does not include 'amounts paid to tax filers who did not incur occupancy cost and are claiming only the Political Contribution Tax Credit or the Sales Tax Credit' (letter, 10 June 1982, from P. Lam, supervisor, Guaranteed Income and Tax Credit Branch, Ministry of Revenue, Ontario).
- 10 The Ontario Ministry of Housing has estimated the cost of several plans. The distributions referred to here are computed from a plan for 100 per cent of gap and 30 per cent contribution rate, with \$280 the threshold rent for households of one to three people and \$325 for households of four or more. I am grateful to Peter Lepik for providing me with these estimates.

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- 11 These comments refer to cost estimates for Plan D. Plan D would cover 50 per cent of gap and have a 30 per cent contribution rate, with no threshold rent.
- 12 Calculated from Fallis (1980, Table 10), by subtracting the market value differential incidence of the first income class from that of the second.
- 13 Corroborating this picture for Ontario of high consumption of housing space by the elderly poor is evidence from the Manitoba survey. It found 21.4 per cent of SAFER recipients there in units of two bedrooms or more and 63.2 per cent in one-bedroom units, despite the fact that only 12.6 per cent of SAFER recipients (as of May 1981) were part of two-or-more-person households (Minuk and Davidson, 1981). The square footage occupied by recipients was apparently more than 50 per cent greater than they would be allotted in Manitoba Elderly Public Housing (Minuk and Davidson, 1981).

7

Integrating a housing allowance with social housing programs

I INTRODUCTION

A housing allowance has implications for other housing programs. Indeed, for many investigators the major advantage of a housing allowance program has been that it might allow governments to withdraw from construction-related housing programs (Downs and Bradbury, 1981). The possible elimination of other housing programs is discussed in this chapter. More generally, this chapter addresses the question of the impact of a housing allowance on other programs and the role of these programs when a housing allowance is in place.

In the first part of the chapter the positive economics of a housing allowance's effect on these programs is examined. Three social housing programs – private rent supplement (section II), public housing (III), and non-profit housing (IV) – are selected for discussion.¹ Their nature is outlined, and the likely impact on them of a housing allowance program is explored. Evidence is adduced from Manitoba and British Columbia on the impact of their housing allowance programs on public housing.

Section V is related directly to policy. There is discussion of certain special benefits bestowed by social housing and not provided in the private market for many low-income households. These are assured quality, availability, and security of tenure. The goal of income integration is examined, as is the second-order goal of reducing the pressure on governments to maintain excess capacity in the private market. Would a housing allowance provide these special benefits and achieve these special goals? This question is discussed with attention focused on the income integration goal.

Section VI examines desirable changes to existing social housing policy if a housing allowance is implemented. One adjustment would

be change in the current rent scales of rent-geared-to-income tenants in social housing. A more sweeping change would be the elimination of some current programs. Arguments are put forward for the retention of public housing and non-profit housing and the elimination of private rent supplement.

Section VII summarizes the chapter.

II PRIVATE RENT SUPPLEMENT

Outline of the program

Private rent supplement, under section 44.1.a of Canada's National Housing Act, is similar to a housing allowance because it houses recipients in the private market. However, it is tied to units rather than to households. Private landlords enter into an arrangement to make specified units available for subsidized tenants. In Ontario, this arrangement may be for a period as short as three years (Ruston et al, 1979). In Ontario, tenants taken from the public housing waiting list enter into a lease with the landlord, paying rent to him based on income and determined by the public housing rent scales. The landlord receives the difference between this rent and the agreed market rent directly from the Ontario Housing Corporation or local housing authorities. With few exceptions, no more than 25 per cent of a residential complex may be Rent Supplement (RS) units. Thus recipients are assured of having largely unsubsidized neighbours, in contrast to the situation in public housing.

Costs and benefits

The budgeted cost of RS to taxpayers is great relative to a housing allowance. The 1979 budgeted amount in Ontario was \$179 per unit per month.² This is almost two-thirds more than the 1980 cost per month per recipient of a VCR housing allowance for households below one-half the poverty line.³ One reason for the high cost is the relatively high negotiated rent per unit, \$270 per month for 1979 (Ontario Housing Corporation, 1978). This is greater than the 33rd percentile rent for two-bedroom apartments in Ontario urban areas of 100,000 people or more in 1980 (computed from HIFE, 1980). The high rent arises because RS units are typically in new, large buildings.⁴ They are thus probably of higher quality than units occupied by most unsubsidized low-income renters and, indeed, probably by most low-middle-income renters.

A second reason for the high cost per recipient is the low contribution rate required of RS recipients. Nominal contribution rates range, depending on income, from 16.7 to 25 per cent for non-elderly recipients and from 20 to 25 per cent for elderly recipients. Actual contribution rates are considerably lower than these because of an array of deductions. Thus for a single adult with one child with gross income of \$492.50 per month, the contribution rate is 21.7 per cent,⁵ far below the 30 per cent rate in the benchmark housing allowance plan. Further, this and contribution rates for other typical RS households are far below the rent-to-income ratios of the majority of similar but unsubsidized privately housed Ontario renters below the poverty line (see Tables 5 and 8, above).

Estimating the benefit per RS recipient is problematic. It is not the difference between the market value rent of a dwelling unit and the amount paid in rent by the recipient. It is instead reasonably estimated as the cash the recipient would accept as compensation for being denied the rent supplement. This would be quite low if the RS recipient household does not value housing characteristics such as newness very highly relative to its valuation of more food and clothing.

The impact of a housing allowance

If the housing allowance program were put into effect what would be the impact on the RS program? Consider first the effect on current RS recipients. Probably very few of them would elect to leave in order to qualify for a housing allowance. Clearly no RS recipient with preferences fairly consistent with the RS housing bundle would leave, because of the much lower net cost of housing under RS than under the housing allowance. Net cost is lower because under RS the contribution rate is lower and the recipient receives 100 per cent of the housing gap, not just part of it. Only recipients with preferences for a very different bundle than the RS bundle would leave the RS program.

If the housing allowance program were implemented and at the same time RS were eliminated, what would the occupants of RS units do? Many would move because the market rents of most RS units are relatively high and housing allowance recipients face high expenditures when rents are above the allowance threshold rent, while RS recipients do not. Suppose for instance that a single person with one child and an income of \$492.50 per month were occupying an RS unit renting for \$270 per month. Then the recipient's rent payment would

be \$107. If RS were replaced by a housing allowance paying 75 per cent of gap with a 30 per cent contribution rate and a threshold rent of \$231, net rent would be \$208, almost twice as much as under the RS.⁶ Despite this dramatic rise in net housing expenditure, probably some occupants of RS units would remain in their units, deterred from moving by monetary and psychic moving costs. In view of the size of the differential it does not seem likely that many would decide that they could afford to stay in their RS units.

III PUBLIC HOUSING

Outline of the program

Public housing is housing owned and managed by government. The term as used here refers only to projects containing 100 per cent rent-geared-to income (RGI) units; municipally owned non-profit housing corporations containing some units renting at market levels are excluded.⁷ In Ontario all public housing units are owned by the Ontario Housing Corporation (OHC) or by the Metropolitan Toronto Housing Company (MTHC).

Recipients are selected from a waiting list partly on the basis of the length of time they have resided in the municipality concerned and partly on the basis of their housing and non-housing need as assessed by a point system. Specifically, family applicants are assigned up to 65 points for health problems, overcrowding, shared basic facilities, and poor structural conditions; 30 points for an exogenous notice to vacate; and up to 70 points for a very low income, a high ratio of rent to income, and a large number of dependants. A very low income can directly account for only 30 points of a possible 135, and it is only very recently that a very low income has had any direct effect on the rating.⁸ A very low income thus has little direct impact on a family's success in obtaining a public housing unit. It is hardly surprising that the incidence of public housing benefits is not very progressive with respect to the income of its recipients relative to all households (Fallis, 1980).

Instead, the point system implies that a family's chance of obtaining a public housing unit is relatively good if, while paying the same rent as other households of the same income and size, it is overcrowded and living in poorer structural conditions. Such a family is paying a higher price for housing service because it is unlucky, because of

inability to search successfully for housing accommodation, or because landlords have assessed it as costly to service. Thus the point system favours incompetent and destructive as well as unlucky, low-income, and discriminated-against families. It is perhaps inevitable that housing projects with such families appear to be difficult to manage (Municipality of Metropolitan Toronto Planning Department, 1979).

Costs and benefits

Partly perhaps as a consequence of a high proportion of costly-to-service tenants, the budgeted cost to taxpayers of public housing is high. For OHC projects in Metropolitan Toronto for 1979 it was \$260 per month per recipient.⁹ (The estimated cost per recipient of a housing allowance for very-low-income households in 1980 is only about 40 per cent of this figure.¹⁰) The very high budgeted amount is the outcome not merely of low tenant rents. Unit *gross* costs are very high. At \$380 per month they are one-third more than the 1980 median rent for two-bedroom units in Ontario areas of 100,000 people or more (computed from 1980 HIFE).

The budgeted costs unfortunately give only a very crude indication of true economic costs. They include no imputed return to equity, there is no deduction for unrealized capital gain, and mortgage expenses are computed on a cash flow basis. A plausible lower bound for the true gross cost per unit is the total of maintenance, utility, administration, and property tax per unit per month. For 1979, this is budgeted for Metropolitan Toronto at \$279. This amount is the true cost only if the cost of capital is zero, and yet it is just a few dollars short of the 1980 median rent for two-bedroom units in Ontario areas of 100,000 people or more. Some sense of the effect of costly-to-serve tenants is seen by noting that this minimum estimate is almost \$100 more than the estimated *gross* cost per unit for MTHC public housing for the elderly.¹¹

Fallis (1980) has estimated that in 1970 the benefit of the public housing subsidy to recipients in the lowest income class was \$20 per month less than the market value of the subsidy. There is some reason to believe that this is too low because of factors making the estimate of the benefit too high.¹² Partially offsetting these factors, however, are ones biasing the benefit estimate downward. These have to do with assured availability and security of tenure. They are discussed later in this chapter.

*The impact of a housing allowance***Impact on numbers moving out**

The impact of a housing allowance on public housing will depend critically on the parameters of the payment formula. Assuming the parameters are those in the VCR plan estimated in Table 26, no public housing tenant would leave public housing for a housing allowance so long as his housing preferences were matched by the housing bundle he was consuming in public housing. The reason for this is obvious. The contribution rate for public housing tenants is less than in the housing allowance plan (see above), and the proportion of the 'gap' paid is 100 per cent, in effect, not the 75 per cent of the housing allowance plan. The extent to which the housing preferences of public housing tenants are matched by public housing bundles is not known. The extent of the protest (see note 39) against the proposal to convert Toronto public housing tenants into rent supplement recipients, however, is some sign that the mismatches that do exist are relatively slight compared to the cost of moving.

Hard evidence on the effect of a housing allowance on numbers moving out of public housing is available from Manitoba. From the start of SAFER (Shelter Allowance for Elderly Renters) in January 1980 only 23 people left Elderly Public Housing (EPH) and were SAFER recipients as of May 1981 (Minuk and Davidson, 1981, p. 37). This is 0.3 per cent of all EPH units. The effect for families is somewhat greater but still small. SAFFR (Shelter Allowance for Family Renters) began in January 1981, and by May 1982 about 80 people had left family public housing and applied for SAFFR, 2.7 per cent of all family public housing units. In each case, vacators receiving a housing allowance represent only a small part of the total number of vacators.¹³

Impact on numbers moving in

Of course, it is possible that occupancy in public housing could fall greatly not because tenants moved out in order to receive a housing allowance, but because the number moving in declined. Occupancy would gradually fall by attrition. Suggestive evidence on this point is available from waiting list data. The size of a waiting list is an indicator of the number wishing to move in, although it is an imperfect indicator because, for instance, some households may place their name on the list as a risk-reducing strategy.¹⁴

As can be seen from the data in Table 29 for year 0 and the prior year, waiting lists were down in Manitoba and British Columbia some months after the implementation of their housing allowances, but by less than 20 per cent in all cases. Further, the waiting list for family public housing in Winnipeg rose again after another year, a phenomenon probably associated with high sustained unemployment rates in 1982.

The net impact of changes in the numbers moving into and leaving public housing is shown by the vacancy rate. Vacancies can exist at the same time as a waiting list because of mismatches between the housing characteristics demanded and those supplied, principally in the number of bedrooms and location. Frictional problems exist also because of factors such as lease commitments. In any case, the vacancy rate rose in Manitoba EPH shortly after the implementation of the program and continued to rise (Table 29). The vacancy rate fell, however, in Manitoba family public housing and in British Columbia.

These data suggest that the housing allowance programs have had some impact on demand for public housing but that the impact has been small. It might appear that the impact in the case of the elderly has been decidedly greater than the impact for families, but factors other than the housing allowance program may lie behind the declining waiting list and rising vacancy rates in public housing for the elderly. The possible importance of other factors is indicated by the pattern in Toronto, where there is no housing allowance program. Over the period 1970-8 the percentage of the elderly applying for elderly public housing steadily declined, and in the MTHC's units vacancies rose from almost zero in January 1978 to 2.1 per cent in July 1979 (Municipality of Metropolitan Toronto Planning Department, 1979, pp. 11, 53, 54). Indexed government pension income and increasing Canada Pension Plan payments, combined with low rent increases in the private market, may have substantially increased the real income of the elderly and reduced their demand for public housing.

Some further insight into the likely effect on public housing of a housing allowance such as those in effect in British Columbia and Manitoba may be gained by examining data from three surveys of elderly applicants for public housing. From Table 30 it can be seen that in two of the surveys only about half of applicants give current expenditure reasons for wanting to move into public housing. A quite large percentage give problems having to do with their current

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TABLE 29

Indicators of demand for public housing before and after implementation of a housing allowance program

	Greater Vancouver	Winnipeg	
	Public Housing for Senior Citizens	Elderly Public Housing	Family Public Housing
<i>Number on waiting list</i>			
Before implementation	5,488	460	375
Year 0	4,569	294	318
Year 1	n/a	176	626
Year 2	n/a	165	n/a
Year 4	3,675	n/a	n/a
<i>Vacancy rate (percentages)</i>			
Before implementation	2.8	0.5	4.1
Year 0	0.9	1.4	2.9
Year 1	n/a	2.2	1.5
Year 2	n/a	3.1	n/a
Year 4	1.2	n/a	n/a

NOTES: BC SAFER was implemented 1 July 1977, Manitoba SAFER 1 January 1980, and Manitoba SAFFR 1 January 1981. 'Before implementation' refers to April 1977 for Vancouver, April 1979 for Manitoba Elderly Public Housing, and April 1980 for Manitoba Family Housing. Years 0 and 4 for Vancouver refer to April 1978 and April 1982, respectively. Years 0, 1, and 2 for Manitoba Elderly Public Housing refer to April 1980, April 1981, and April 1982, respectively. Years 0 and 1 for Manitoba Family Public Housing refer to April 1981 and April 1982, respectively. In all cases the stock of public housing did not change over the period. Greater Vancouver data were obtained from Susan Black, British Columbia Housing Management Commission. Winnipeg data were obtained from Eric Wilson and Lil McMillan, Winnipeg Regional Housing Authority.

housing. It seems likely that most of these problems could be remedied by moving within the private housing sector, but at the cost of perhaps substantially increased housing expenditure. On average, however, an even larger percentage wished to move into public housing in order to get what they would have difficulty getting in the private sector: companionship, physical and personal security, and security of tenure.¹⁵

This range of motivation for wishing public housing is roughly consistent with the fact that only 20 per cent of the Manitoba waiting list for EPH were SAFER recipients, almost a year and a half after the start of SAFER (Minuk and Davidson, 1981). And a remarkably similar proportion, 19.5 per cent, of the waiting list for family public

TABLE 30
Articulated motivation of elderly public housing applicants

Reason for wanting to move	Percentage citing reason ^a		
	Toronto	Edmonton and Calgary	British Columbia
<i>Current expenditures problems:</i>			
Rent too high; financial burden	35 (1)	42 (1)	52 (1)
Problems with maintenance; upkeep; unit too large	9 (1)	37 (2)	n/a
Divorce, separation, death	4 (1)	n/a	n/a
<i>Housing bundle problems: Total</i>	<u>47</u> (5)	<u>32</u> (5)	<u>36</u> (n/a)
Need for privacy, conflict between generations	25 (2)	15 (2)	n/a
Unit too small	9 (1)	4 (1)	n/a
Poor quality	10 (1)	n/a	n/a
Poor location	3 (1)	13 (2)	n/a
<i>Risk aversion, health and social reasons</i>	<u>92</u> (5)	<u>36</u> (4)	<u>12</u> (n/a)
Poor health		8 (1)	12 n/a
Lonely, need for companionship, divorce, separation, death	20 (2)	21 (1)	n/a
Physical/personal security	29 (1)	7 (1)	n/a
Security of tenure	34 (1)	n/a	n/a
Forced move	11 (1)	n/a	n/a
<i>Other</i>	2 (1)	18 (1)	n/a

^a Number of component reasons included in percentage given in brackets.

SOURCES:

Toronto: Metropolitan Toronto Housing Company Ltd (1979).

Edmonton and Calgary: Alberta Department of Housing and Public Works Policy and Program Development Branch, Policy and Planning Division (1978).

British Columbia: British Columbia Ministry of Municipal Affairs and Housing (1978b). The response given for 'financial burden' refers to those who replied 'yes' to 'Would you prefer to stay in your present accommodation if you could afford to do so?'

Those who responded 'no' to this question were asked to write in their reason; these were subsequently classified.

housing had applied for SAFFR benefits about a year and a half after the introduction of SAFFR.¹⁶ More important, only 7.5 per cent of those actually moving in to family public housing had applied for or had been on SAFFR (Minuk, 1982).

This suggests that for low-income households, market housing and public housing are not close substitutes. Plausibly, most households entering public housing do so largely because they are attracted by assured quality and security as compared with their current accommodation. A housing allowance cannot provide these characteristics. At the same time a high current housing expenditure does not appear to be a characteristic of public housing applicants. If it were, they would be eligible for the housing allowance. This in turn suggests that most public housing applicants either have a weak general preference for housing or are the beneficiaries of a low price of housing service. Of course, some non-recipients may be among the large class of eligibles who never apply for a housing allowance. If a family's income falls it might choose public housing rather than SAFFR and not bother to make an application to SAFFR if the waiting time for public housing is short.

Implications of the evidence

What does the evidence suggest would be the likely impact on public housing of a housing allowance implemented in other provinces? First, consider public housing for the elderly. If the housing allowance were no more generous than that estimated in Table 24, there would probably be little effect in the short run. The evidence is strong that public housing and market housing are not close substitutes. As Minuk has put it, in Manitoba 'shelter allowances are not threatening the client base for subsidized housing' (Minuk, 1982, p. 40), and this may well be true elsewhere.

Suppose, however, that public housing rents were increased or that the housing allowance formula were made more generous than that in Table 24, so that the minimum housing expenditure required of beneficiaries were the same in both programs. In that case it seems easily possible that a third of the elderly currently moving into public housing would not do so. The impact over the longer term could be substantially greater than the short-term effect. The existing stock of public housing for the elderly contains units that are far smaller than those occupied by most poor elderly households. Typically a single elderly person is accommodated in a bachelor unit in public housing,¹⁷ while in 1980 the average number of rooms for elderly households with an income less than \$8,000 was over three.¹⁸ This makes the public housing bundle relatively unattractive at present, and as the real income of the elderly rises this is apt to be exacerbated. If a

housing allowance becomes available, especially a generous one, the sacrifice of space required in order to obtain the other benefits of public housing is likely to become a sacrifice households are increasingly unwilling to make. The problem of the increasing obsolescence of the public housing stock for the elderly will exist whether or not a housing allowance is implemented, but a housing allowance might accelerate the process.

In the case of family public housing, the evidence is even stronger that a housing allowance like that estimated in Table 24 would have little effect in the short run. Even if the two programs were of about equal generosity, the impact on public housing might not be substantial. This hypothesis is based not on survey evidence on the preferences of public housing applicants but on two other factors. First, the evidence of chapter 2 suggests that availability and security-of-tenure problems are apt to be much more severe for families than for the elderly. Second, it appears that public housing units for families offer a level of housing service substantially greater than many low-income families enjoy in market housing. Evidence for this is that a substantial proportion of low-income families in market housing live in dwellings in poor conditions (see chapter 2). Further, the average number of rooms for families in 1980 with income less than \$8,000 was less than two per person.¹⁹ A small single-parent family might get as much space as this in a public housing unit. Families, much more than the elderly, are apt to improve their level of housing service by moving into public housing.

In sum, over the long term, a housing allowance for the elderly might substantially exacerbate the existing vacancy problems in public housing for the elderly, especially if the allowance formula is generous. A housing allowance for families, however, would reduce the pressure of demand on family public housing, but plausibly not by very much. In the short run, a housing allowance would likely have little impact on public housing.

IV NON-PROFIT HOUSING AND ASSOCIATED RENT SUPPLEMENT

Outline of the program

In the late 1970s the federal government discontinued direct loans under section 43 of the National Housing Act (NHA). In its place there is now a program under section 56.1 of the NHA in which non-

profit housing is financed by a loan from a non-CMHC source with an annual subsidy from CMHC to cover operating losses. In the first instance the maximum subsidy is the difference between the annual mortgage payment at the market rate and the annual payment that would have been required if the interest rate had been 2 per cent. Any operating losses not covered by this subsidy are to be covered by the province up to the amount of the CMHC subsidy; losses greater than this are to be shared equally by CMHC and the province under section 44 of the NHA (Canada, Task Force on CMHC, 1979). In Ontario the province has apparently agreed to provide non-profit sponsors with a subsidy of only up to 85 per cent of the initial federal maximum (Municipality of Metropolitan Toronto Planning Department, 1979).

A critically important provision of this program in Ontario is that 75 to 85 per cent of family unit tenants pay 'market rent' while the remainder pay rent based on the federal scale used for public housing. In the case of elderly housing, the proportion of market rent units must be at least 50 per cent.²⁰ Provincial and municipal governments, as well as private non-profit organizations, may be sponsors. Thus some non-profit housing is like the public housing discussed in the previous section, with the critically important distinction that it is required to have a large proportion of market tenants. In contrast, public housing built under sections 40 and 43 of the NHA has no such requirement. Until very recently it positively discouraged middle-income tenants because rent was geared to income, no matter how high the income. Rent paid could have been greater than market rent for a tenant whose income rose but who chose to stay in public housing.

A second distinction between government-sponsored non-profit housing and public housing under section 43 is the greater capital bias in the non-profit provisions. The maximum first-phase subsidy obtainable for a non-profit unit and provided in total by CMHC depends on its capital cost. Maintenance, utility, property tax, and other operating costs do not affect the maximum subsidy obtainable. There is thus an incentive for the province to encourage the production of housing service with a higher ratio of capital inputs to operating inputs than if all inputs were equally subsidized. For instance, a very expensive kitchen flooring with a long maintenance-free life would be heavily subsidized by the federal government. Cheaper kitchen flooring serving the same function might have substantial maintenance costs which are relatively likely to be subsidized by the provincial

government. The capital bias is limited by ceilings on the capital cost per unit (Streich, Clarke, and Harding, 1979). The severity of this constraint, however, is open to some question: Cityhome (the city of Toronto's non-profit builder) plans to include air conditioning in buildings in the future.²¹

Costs and benefits

The resource costs of the subsidy to non-profits is not easy to estimate. There is a strong case for the proposition that market-rent tenants receive no subsidy whatsoever. To the extent that the rents they pay are true market rents and they do not expect to remain in their units until rents fall below market, they are certainly not receiving a subsidy relative to other renters. Under conditions of inflation and with the current income tax system, however, it is likely that all renters are the recipients of a tax expenditure subsidy in long-run equilibrium.²² Further, if market rents are below cost the addition of new non-profit units to the market will impede the adjustment to eliminate this gap.²³ In these circumstances new non-profits confer a benefit on all market renters – those occupying non-profit units as well as private renters.

It does seem entirely plausible that many years after the beginning of some non-profit projects all tenants, not merely RGI tenants, will be subsidized relative to private renters. This is the outcome of the fact that while construction costs, the cost of new dwelling units, and market rents may be expected to rise over time (so long as inflation continues), the capital cost payments of an existing non-profit project will rise only to the extent that the interest rate on its mortgage rises. Thus the interest write-down subsidy required from CMHC will fall over time and will eventually be eliminated. Yet the only apparent provision for any repayment to CMHC once the non-profit moves into a surplus position is the clause 'In order to remain eligible for continuing support, any surplus assistance received in a previous year must be returned by the builder to CMHC with the annual operating statement' (Canada, Task Force on CMHC, 1979, p. 59). Thus there is nothing to prevent a non-profit that forecasts a continuing surplus simply from setting rents for its non-RGI tenants at a level below market. Certainly non-profits funded under the pre-1979 policy have taken this route.²⁴

In sum, while in the early years of a non-profit project non-RGI tenants may not be subsidized, in later years such tenants may be, at

least in some projects. However, a provision of the current (1979 and later) program will tend to lengthen the period during which non-profits operate at a loss and so must charge non-RGI tenants market rent. Specifically, the RGI tenants in the current program are funded from the general revenue of the project. There is no special subsidy designated for them alone. This is a critical change from the 1973-8 program under which RGI tenants were funded through rent supplement.²⁵ Indeed it is possible that post-1978 projects may operate at a cash-flow loss even when their mortgage is paid off because of the low rent revenue they receive from RGI tenants. The possibility of never generating a surplus is clearly greater, the greater the proportion of RGI tenants in the project.

The presence of both non-RGI and RGI tenants in the non-profit project has another noteworthy implication. There is a *prime facie* case that there will be a subsidy to the project attributable to the non-RGI tenants even though they themselves are not subsidized. This apparent paradox arises as follows. There is a presumption that RGI tenants impose a negative externality on middle-income tenants.²⁶ If this is true, the market rent of the non-RGI units must be less than the market rent of otherwise similar units in projects without RGI tenants. The market rent differential may vary greatly according to the nature of the RGI tenants. The evidence of chapter 2 suggests that the differential may be quite large for family RGI tenants, especially single-parent-family RGI tenants, and non-existent for elderly RGI tenants. The rent discount necessary to attract non-RGI tenants to the project is the resource cost of having them in the project. This constitutes a real subsidy to the project. It is not a subsidy to the non-RGI tenants, but is rather the cost of achieving the goal of income integration. To the extent that income integration is valued by RGI tenants, this is a subsidy benefiting them. If living with higher-income neighbours is not valued by low-income tenants, the subsidy to achieve income integration does not benefit them although it may benefit others. The beneficiaries might be taxpayers in general, or the residents of a neighbourhood that would have a public housing project against its wishes if income-integrated non-profits did not exist.

Creaming RGI tenants

This discussion leads to the hypothesis that post-1978 non-profits will tend to accept as RGI tenants those who are relatively low cost to service and who have a relatively high income. A single-parent

mother with one child will require less maintenance expenditure than one with two, other things being equal, and will impose fewer negative externalities. A family close to the top of the RGI income band will pay a relatively high rent. Having low-cost high-revenue RGI tenants in the short run will help keep the losses of a new project below the maximum that the federal and provincial governments will fund. In the long run it will hasten the day when the project might make a surplus.

In the earlier non-profit program (1973-8), there was less incentive for creaming in the selection of RGI tenants, because the difference between their rent contribution and the unit rent was paid through rent supplement. None the less there is some indication that creaming has taken place in these projects. Over three-quarters of non-profit managers surveyed reported selecting rent supplement tenants from their own waiting list, not from provincial lists (Thompson and McCulloch, 1978). In almost all cases the provincial point-rating system was not used. There is also some indication of creaming in the case of non-RGI tenants. Elderly tenants tend to be low cost to service, and 71 per cent of non-profits occupied July 1973 - July 1977 were for senior citizens (Thompson and McCulloch, 1978, Table 3.2).

The implication of creaming is that the non-profit programs will tend to be less progressive than public housing and far less progressive than a housing allowance in their distribution of benefits. In the 1973-8 program it seems plausible that the distribution of benefits, considering only the RS tenants, has been less progressive than public housing. This program is, unsurprisingly, even less progressive for 'break-even' renters than for RGI tenants: among senior-citizen break-even renters surveyed in 1977, 44 per cent had an income of \$5,000 or more, while only 18 per cent of RS senior-citizen renters had an income this high.²⁷ In the post-1978 program the non-RGI renters pay, at present, market rent, not break-even rent. Because they receive no subsidy, they may be omitted from consideration. But among the RGI tenants, it is plausible that the distribution of benefits may be less progressive than in the earlier program, because of the greater incentive for creaming.

The impact of a housing allowance on non-profit housing

What would be the likely impact of a housing allowance on non-profit housing? First consider the non-RGI tenants. Assuming as in Manitoba that tenants of non-profits are eligible for the allowance, some

increased demand for recently built non-profits might be induced by the introduction of a housing allowance. These non-profits tend to have a relatively high rent for non-RGI tenants, and an ICPOR housing allowance subsidizes a large part of any increase in rent up to the threshold rent. For analogous reasons a housing allowance might induce a reduced demand for older non-profits with low rents.²⁸ The drop in demand would tend to be greater for the more obsolescent and unsatisfactory units. Thus a housing allowance might especially affect old limited-dividend projects, which were typically built in undesirable locations.²⁹

The size of these impacts, however, is likely to be negligible, especially in the short run, given the low price elasticity of demand for housing among low-income households and the high cost of moving. Any impact that does occur, in the case of the high-rent non-profits, would probably come through a reduction in the number of low-middle-income tenants moving out when their income dropped. These non-profits might increase their retention of low-middle-income households suffering a period of unemployment. The housing allowance program would cushion temporary reductions in income and help avoid forced moves. In the case of undesirable but low-rent non-profits the impact would probably come through a reduction in the number moving into these units, more than through an increase in the number moving out. There are no reports of any impact on non-profits at all in the Manitoba housing allowance reviews (Minuk and Davidson, 1981; Minuk, 1982).

Next, consider RGI tenants in non-profits. So long as the current rent scale is properly used, the net impact on these tenants is apt to be negligible. It has been found, however, that among surveyed 1973-8 non-profits 39 per cent of elderly and 42 per cent of non-elderly RGI tenants were actually paying more than 30 per cent of their income in rent.³⁰ Thus some of these tenants might pay less if they opted for a housing allowance than if they remained as RGI tenants.

If RGI tenants in non-profits were eliminated, there would be some tendency for a shift among the previously RGI group into the older non-profits. Under the rent supplement program the cost to a recipient of living in a recent high-rent non-profit is the same as the cost of living in an old low-rent non-profit. Under the housing allowance program, this would change. Thus the effects of a housing allowance on the demand for accommodation in old and new non-profits among the lowest-income households would tend to offset the effects of a

housing allowance on the demand pattern of those of middle income. An inescapable implication of this is that eliminating RGI units in non-profits and putting a housing allowance program in place would thus reduce income integration in individual non-profits unless the old non-profits are currently dominated by tenants with relatively high incomes.

V SHOULD A HOUSING ALLOWANCE REPLACE EXISTING SOCIAL HOUSING PROGRAMS?

Would the implementation of a housing allowance allow existing housing programs to be wound down? The draconian approach of integrating a housing allowance with other housing programs would be, after all, simply to eliminate them. An essential first stage in answering this question and, more generally, assessing the integration question is a discussion of the benefits and goals of existing programs.

Benefits and goals of existing programs

The goal of social housing programs can be stated simply as the provision of adequate housing for low-income households. This goal, however, is too general to give much insight into the reasons for social housing. After all, as chapter 2 shows, the great majority of low-income people who are not social housing tenants live in structurally adequate and uncrowded accommodation. Their major problem is excessive housing expense. Indeed, an entirely reasonable response to these facts is to recommend, as have Fallis (1983) and Smith (1983), that social housing programs be replaced by income redistribution programs.

This response, however, gives no weight to certain benefits of social housing that may be placed under the umbrella of 'adequacy' but yet for certain households may not easily be available in market housing.

Assured quality

One of these perceived benefits is assured, continuing quality. Risk averse households may find social housing attractive because of the perception that its condition will always be maintained at some minimum level and a unit's condition during their tenure will vary little from the condition observed when they made the decision to rent it. There are several rational bases for this perception. First, because

losses are government-subsidized, high unexpected maintenance expenditure cannot drive the owner of a project into bankruptcy.³¹ A private landlord might ordinarily keep his building well maintained, but under the pressure of unexpected high interest or other expense might reduce maintenance in order to protect his cash flow. A public agency does not face the same pressures. Second, there is a public commitment to at least a minimum level of maintenance. Third, ownership of the social housing project is virtually certain to remain the same. One of the hazards of market tenancy is the possibility that the building will be sold to a new owner with different maintenance practices.

Continuing quality assurance will tend to be of greater importance, the greater the cost of moving. If the cost of moving (including the cost of breaking a rental agreement) were zero, any risk of quality deterioration would be almost as irrelevant as it is for most consumer goods. If a litre of milk is sour one day, the consumer can easily switch brands the next day. Switching housing is not so easy.

There are no data to indicate the probability of substantial quality deterioration. Some indication of the upper bound of this probability is given by the proportion of dwellings in poor condition. For elderly renting households below the poverty line, the incidence in the urbanized core of Ontario CMAs in 1974 was a mere 2.5 per cent (Table 3). For similar families, however, it was 12.9 per cent (Table 5). This suggests that the attraction of assured quality may be a more important motivation for social housing applicants who are families than for the elderly.³² Further, a regime of rent control is apt to increase the importance of assured quality for all applicants.

Availability

A second major advantage of social housing to recipients is that it is available when housing, even at the median rent, is unavailable to them in the private market. High-cost households among low-income households are especially likely to find themselves faced with unavailability. Households may be costly for landlords to deliver service to because they use a large amount of maintenance service or because they create negative externalities for other tenants. Landlords in a building populated by whites who dislike visible minority racial groups may experience an increase in turnover costs when dwelling units are leased to tenants belonging to a visible minority.³³ The perceived tendency to vandalism (Ruston et al, 1979) of the

children of single-parent families means that single-parent families are perceived as high-cost tenants.

In the long run, availability problems for particular types of households may not be a problem. Single-parent families are a relatively new phenomenon as a sizeable segment of the housing market. If these households are willing to pay a price for housing service that is as great as the cost of providing it, it may be expected that landlords will eventually develop housing for them. Private projects available to single-parent families, with rents higher for comparably sized units than in projects unavailable to single-parent families, may be expected to appear in the long run. None the less, public housing confers a benefit in the short run.³⁴ Further, in the future costly tenants of some other type may emerge which the private market may then take time to provide for.

The availability of social housing – or, more precisely, its ready availability – is also an attraction for those who are not high-cost tenants but who have high search and information costs. These include frail elderly people, the borderline mentally ill, the mentally retarded, and the physically disabled. In the case of social housing, incompetent consumers need only apply, perhaps with the aid of a social worker, and then wait in the queue. They know that the housing they will be offered has certain standard characteristics, and so inspection of an array of accommodation is not required.

The importance of availability is especially great in two kinds of markets. The first is markets where the vacancy rate is very low, as in Toronto in recent years. The form of rent review will clearly have an impact on this situation. The second is markets where there is market failure in the sense that no accommodation of a certain type is available. In some small communities there may be no rental accommodation whatsoever for the elderly in the private market, despite their ability to pay economic rent. In this case, social housing may be required to fill the gap.

Security of tenure

A third advantage of social housing is the protection it affords against involuntarily-incurred moving costs. Admission to public housing confers with it virtual security of tenure. Tenants are not evicted except under unusual circumstances.³⁵ In particular, tenants are not evicted because their landlord has decided to occupy the dwelling himself, because the building is being demolished, because the

building is being converted to condominium status, because the house is being sold to a new owner who intends to obtain possession and occupy it, or (save for exceptional circumstances) because renovation is being undertaken.

There is evidence that insecurity of tenure is a substantial problem. In late 1981 City of Toronto planning staff were aware of thirteen apartment buildings in which eviction had been ordered in order to undertake renovation activity. Perhaps most of this renovation was induced by the provisions of rent review³⁶ and so might be expected to stop if rent review provisions were changed. However, there is no indication that the process of gentrification of large areas close to the centre of Toronto would grind to a halt if rent review ended. Yet gentrification, involving the deconversion of two-, three-, or four-dwelling-unit buildings back to single-family or luxury duplex use, may induce more evictions of low-income families than does the renovation of apartment buildings. Further, much the same incentives that generate deconversion and apartment building renovations also generate demolitions to clear sites for condominiums. As of early 1982, twenty apartment buildings involving 750 dwelling units were in the process of being demolished or proposed for demolition in the city of Toronto.³⁷

It is instructive, in view of these indications of a large number of evictions, that Toronto's elderly applicants for public housing are apparently very concerned about security of tenure – much more so than those in Calgary and Edmonton. Elderly applicants for public housing were asked the reasons they wished to move (Table 30). In Toronto, 34 per cent gave as a reason security of tenure; 11 per cent, forced move; and 29 per cent, physical and personal security. For Calgary and Edmonton, only 18 per cent gave 'other' (which included future planning and possible eviction) and 7 per cent, better safety and security.³⁸ The strength of the response in these categories relative to the responses in expenditure categories is also much greater for Toronto than for Calgary and Edmonton. One may also speculate that it would also be much greater for Toronto than for other Ontario cities.

An indication that security of tenure is valued by the non-elderly as well as by the elderly is the response to the proposal that public housing in Toronto should be converted to non-profit, with only 25 per cent of the units, rent-g geared-to income units. The remaining 75 per cent of RGI tenants would be dispersed under rent supplement to private buildings. Although this proposal would have resulted in no

change in monthly housing cost to existing public housing tenants, it met with very strong opposition.³⁹ Part of this was opposition to living in an income-integrated community. And part, no doubt, arose out of a misunderstanding of the proposal and a misplaced concern that some existing tenants would lose subsidized housing. But it is hard to dismiss entirely the explicit plea, 'We do not want to leave our communities.'⁴⁰ This is opposition to a forced move and its associated costs. Moving into public housing is one strategy a household may use to reduce the likelihood of future enforced adjustment costs. Those who have chosen this strategy might well object to a change in the characteristics of public housing and to the possibility of a forced move.

Security of tenure is especially important for households that have a relatively high cost of moving. This is one rationale for excluding young, low-income single people from public housing: the transiency associated with their housing in the private market may impose less cost on them. They do not have children whose schooling would be disrupted by moves; they are relatively fit physically. Consistent with this view is their pattern of mobility. As income rises, the incidence of these households with a very high moving rate changes very little (Table 8). This is in sharp contrast to the situation for families: this incidence for them falls sharply with income (Table 5). An interpretation of these data is that families, but not the childless young, perceive moving as costly and as their income rises they choose accommodation that will reduce its probability.

Income integration

In recent years a major goal of housing policy has been the achievement of income integration (Streich, Clarke, and Harding, 1979). Whom does income integration benefit? There is little evidence that it directly benefits most low-income households. On the contrary, the strong negative reaction to the proposal (Municipality of Metropolitan Toronto Planning Department, 1979) that public housing projects in Toronto be made income-integrated suggests that many low-income households prefer housing that is income-segregated. One public housing tenant group argued:

Falstaff Community is seen by the tenants as much more than just a public housing unit. Although Falstaff is a young community, tenants have made their friends here, raised their

children here and worked together here. The community recreation council, the preschool program, the newsletter, the clothing boutique say that Falstaff tenants work together and build together ... Falstaff tenants say that once a policy is administered that permits 25 percent low-income families per building and 75 percent high income then those of need may not have the power and voice to have those needs met ... *Then* yes we will have ghettos - minorities without opportunity living within a majority. (Falstaff Towers Resident Association, 'Response to Metro Report, "Options for the Future";' petition to Metropolitan Toronto Committee on Housing and Social Services, 6 March 1980)

This quotation strikingly points out the possible agglomeration economies for low-income households of living with others who are the same. They may benefit from lower prices and from lower information costs.

A more likely beneficiary of income integration is the taxpayer. Agglomeration diseconomies of low-income households may arise in the form of increased social tension, increased vandalism, crime, and violence. It is claimed that income integration would reduce these problems (Municipality of Metropolitan Toronto Planning Department, 1979). Police and maintenance expenditure would fall. This may be true, but it also may be true that the chief impact on crime and violence would be their wider dispersion, not their reduction. Police expenditure in that case might actually rise because of the costs of scattering manpower. A further possible cost of income integration might be the worsening of the environment for higher-income households.⁴¹ This would imply a lowering of the rent these households would be willing to pay, and accordingly a lowering of the value of the dwelling units occupied by higher-income households.

A general argument for income integration is the view that for the survival of democracy people of different sorts and conditions must have daily contact. Thus income integration in social housing is seen as a way to offset in part the effects on democracy of exclusionary zoning and building regulations. Perhaps the most effective argument for income integration lies at a far different level. It is likely that only social housing that is income-integrated is acceptable to many municipalities, especially suburban municipalities. Thus if social housing is beneficial for other reasons, income integration of social housing is

beneficial simply because it is the necessary condition for the construction of social housing.⁴²

Reduction in pressure for a minimum private market vacancy rate

One possible benefit of social housing is at a very different level from those considered so far. The existence of social housing may make a very low vacancy rate in the private market tolerable, so that the waste of resources implicit in a vacancy rate of, say, 5 per cent rather than 0.5 per cent⁴³ is avoided.

Why may a very low vacancy rate be intolerable? Because its costs are probably borne disproportionately highly by the poorest households, by those most in need. These households are likely to be costly to service and to have high search costs. Contrast the situation of a 30-year-old professional and a low-income single-parent mother. The former is an acceptable tenant for virtually any landlord and in a tight market will find it relatively easy to search for accommodation and to double up temporarily with others while he waits for a desired apartment to be vacated. The latter will likely not.

Voters may not be willing to accept a very low vacancy rate unless there is social housing to provide a refuge for those who bear most of the costs of the tight market. Suppose that without social housing there is a public policy of offering subsidies to private landlords until there is a vacancy rate of 5 per cent, while with social housing a 0.5 per cent vacancy rate is acceptable. Then without social housing there would be a waste each year of 4.5 per cent of the housing service capacity of the private rental stock. Under these circumstances, if there were social housing, if social housing units were only 4.5 per cent of the stock, and if social housing tenants paid rent equal only to the difference in operating costs between an empty and an occupied unit, the social housing would be costless to society. Of course the amount of social housing necessary to make a very low private vacancy rate acceptable in general will be different from 4.5 per cent.⁴⁴ But so long as the existence of social housing is required in order to make it politically possible to maintain a very low vacancy rate in the private market, part of the cost of social housing should be taken as a cost of avoiding waste in the private market.

Benefits and goals of a housing allowance

Would a housing allowance achieve the goals and provide the benefits

of existing social housing programs? First consider the special direct benefits to social housing tenants: assured quality, availability, and security of tenure. A housing allowance that assists occupants of private rental housing cannot provide these benefits because of the nature of the private rental market. However, a housing allowance may increase availability for low-income tenants because it will tend to make them more credit-worthy and therefore more desirable to landlords. In addition, a housing allowance extended to owner-occupants as well as renters would likely do as well as social housing in providing the benefits of assured quality, availability, and security of tenure to its owner-occupier recipients. An owner-occupier controls the quality of his unit, and by definition he makes the housing service of his unit available to himself. It is clear, however, that many – probably most – housing allowance renter recipients will not be able to obtain financing for a house purchase even with the help of a housing allowance, and so owner-occupancy as an alternative to social housing will not be an option open to them.

Next consider income integration. It is virtually certain that housing allowance recipients will be more income-integrated than public housing tenants, because public housing rules ensure that its projects are generally 100 per cent occupied by RGI tenants while allowance recipients will be living among non-recipients. However, allowance recipients will probably be less income-integrated than private RS or RGI non-profit tenants. At a theoretical level Muth (1969) has made a strong argument for the likelihood of segregation in an unregulated market. Essentially the argument is that a poor person will be willing to pay more for the housing service of a unit next to the home of another poor person than will a middle-income person, because the disutility of having a poor person as a neighbour is hypothesized to be less for the poor person than for the middle-income person.⁴⁵ Thus a poor person will outbid a middle-income person for a unit next to another poor person. And thus poor people will tend to live together, separate from middle-income people.⁴⁶

The data suggest that private housing is quite income-segregated. Consider the case of the city of Toronto. Of its 142 census tracts, 49 per cent had an average household head income in 1970 of less than \$6,000, while 7 per cent had an average income more than twice this.⁴⁷ In very few census tracts in the Toronto suburbs was the average as low as \$6,000. Thus the poor tend to live in the city and to be concentrated in certain areas there.

It might be argued that evidence that the poor are locationally quite segregated before a housing allowance plan is in effect indicates little about the impact of a housing allowance, because the allowance will encourage mobility. There is evidence from the US EHAP, however, that the mobility effect of an allowance is slight, and there was no detectable tendency for households to move into areas of lesser concentration of the poor or of their own racial-ethnic group (Rossi, 1981). Evidence from Winnipeg also suggests that a housing allowance would have a slight effect, if any, on segregation by income class. First, there is no evidence (see chapter 4) that Manitoba's SAFER has increased mobility. It would still be possible, however, for those households that *did* move to have moved into areas with a lesser concentration of the poor. In fact, more than 49 per cent of all moves were moves *within* one of Winnipeg's 29 postal code areas. Further, almost every postal code area where there were any moves at all experienced both in-migration and out-migration. Postal codes experiencing a net out-migration had a net loss of only 20 per cent of all the moves identified in the postal code check.⁴⁸ Finally, an informal check of the small net migration that did occur suggests that it does not exhibit an integration tendency.⁴⁹

The evidence indicates, in sum, that whether or not a housing allowance would achieve the goal of income integration depends on the extent of desired integration. If no more integration is desired than that currently prevailing in the private housing market, then a housing allowance will achieve it.

Finally, consider the second-order goal, reducing the pressure for a substantial vacancy rate in the private market. There seems no compelling reason to believe that a housing allowance would do very much to achieve this goal. High-cost-to-service households will remain so – although perhaps a little less so – after receiving a housing allowance. So will high-search-cost households. A substantial vacancy rate will still hurt them.

VI DESIRABLE CHANGES

Changes in rent scales

If a housing allowance is implemented, equity and efficiency considerations dictate that the rent contribution of RGI tenants in social housing be changed so as to be consistent with the housing allowance formula. Precisely what consistency requires, however, is not an easy

question. At the least the rent of RGI tenants should be no less than the minimum rent that housing allowance recipients must pay in order to qualify for the allowance. For example, in the case of the VCR plan estimated in chapter 6 this would be 40 per cent of gross income for one-person households and 25 per cent for those with three. This represents a far higher rent than is currently charged RGI tenants. Further, *prima facie*, for horizontal equity the housing allowance formula should be used in its entirety to determine the rent of RGI tenants. Thus, where R is less than threshold rent, a two-person household would pay $R - 0.9(R - 0.3Y) = 0.1R + 0.27Y$, where R is the imputed market rent for the unit concerned and Y is income. If market rent is greater than threshold rent the net rent of the recipient would be greater than $0.1R + 0.27Y$. For the case considered on pages 162-3, but using 90 per cent of gap, the net rent would go from 21.7 per cent of income to 39.6 per cent of income.

A problem in applying the full housing allowance formula to public housing tenants would be determining the market rent of the units they occupy. The market rent of these units would not be as great as that of physically similar private units so long as there are negative externalities of low-income neighbours. The market rent will be lower if a unit in public housing is less desirable than a unit in private projects.

A further problem in using the housing allowance formula, either for public housing tenants or for other RGI tenants, is that these tenants may not value some of the characteristics that raise the market rent of the unit. For example, a single-parent mother may wish to move into a non-profit housing unit largely to avoid frequent moves. The unit may rent for well above the housing allowance threshold rent because it is new and well maintained, but the single-parent mother may prefer to spend her limited income on more and better food rather than on newness and high maintenance in her housing. It would seem harsh, by using the housing allowance formula, to require her to pay for newness when the characteristic of social housing she wants is security of tenure. It seems plausible in view of the characteristics of low-income housing in the private market, especially in rural areas (see chapter 2), that many of the high-cost characteristics of social housing are the outcome of taxpayers' and bureaucrats' preferences, not tenants' preferences.

In view of these considerations, it would seem equitable to apply the housing allowance contribution rate to RGI social housing tenants,

but not to use the rest of the formula. A quite appealing alternative would be to apply the housing allowance formula but only up to the housing allowance threshold rent. In other words, if the market rent in a social housing project were above the threshold rent of the housing allowance formula, the RGI tenant would pay only this threshold rent minus the amount determined by the housing allowance formula. For the single-parent case previously referred to, this would reduce the net rent-to-income ratio to 31.7 per cent from 39.6 per cent.

The above discussion has implicitly assumed that for equity between RGI tenants and housing allowance recipients the RGI contribution rates should be changed. But there is no reason in principle why the allowance contribution rates should not change as well. In particular, it would be appealing to use the funds saved through some increase in the RGI contribution rates to reduce the housing allowance contribution rates from the level used in chapter 6. The housing allowance plan would be enriched, and the contribution rates for both RGI tenants and housing allowance recipients would be lower than those given for the allowance plan in chapter 6 but higher than those in current use for RGI tenants.

Elimination of existing programs?

Should existing housing programs not merely have their rent scales adjusted when a housing allowance program is introduced, but be eliminated together? The prime candidate for the answer yes is private rent supplement. It provides available housing, in some circumstances, relatively assured quality, and the rather dubious benefit of income integration, but it does not provide security of tenure, because landlords may be committed only for three years. Tenants arriving after the beginning of an agreement may find their tenure particularly short. Further, RS agreements are often used by landlords as a stopgap to fill new buildings when the market is loose, and so the RS agreement is apt to be terminated when the market is tight,⁵⁰ just when the need is greatest. Thus, RS provides few benefits that a housing allowance does not, and it is much more expensive.

There is one major advantage to the private RS program. It allows governments to respond to short-term need without making a long-term commitment. If there is a bulge in the demand for family social housing at a particular location, using private RS to fill it avoids an unneeded stock of public housing at some future date. This advantage does not seem to be great enough to justify the continuation of the pro-

gram, however, in view of the uncertain availability of private units for the RS program.

Should non-profits be eliminated if a housing allowance is implemented? Perhaps not, because they provide the benefits of availability, assured quality, and security of tenure unavailable to many low-income households in the private market. It would be much easier to justify support for their continuation, however, if non-profits purchased old existing buildings in less than prime locations rather than built new buildings in prime locations as Toronto's Cityhome has done. The resulting housing service bundle commands a high market rent. Probably most RGI tenants would purchase service worth much less if they were given the cash equivalent of their housing subsidy. The high cost of the subsidy to RGI tenants will be underlined with the introduction of a housing allowance if, as is suggested above, the RGI program in non-profits is retained, albeit with a somewhat higher rent scale. A housing allowance recipient with the same income as an RGI tenant and living in the same non-profit project will pay a much higher net rent. Such apparent horizontal inequities may have to be tolerated in order to provide security of tenure and availability to high-cost tenants who do not value the other attributes of new non-profits. But such inequities are undesirable and would be greatly reduced if the attributes of the non-profits were changed.

One of the reasons recent non-profit projects may use new buildings is for non-housing reasons, namely to provide employment in times of high unemployment. But another reason for new buildings, or extensive renovation of old ones, and for the use of prime locations may be to ensure that the projects are attractive to the middle-income tenants needed to achieve income integration. Unless income integration is highly desired by taxpayers or necessary in order to get social housing accepted by a municipality or neighbourhood, there seems little reason to continue the existing non-profit program. If income integration is not desired for these reasons, the existing RGI program in non-profits should be eliminated. Existing RGI tenants would then receive a housing allowance that would not be large enough to enable them to afford to stay in the new, prime-location non-profits. As a consequence, quite soon after the replacement of RGI by the housing allowance the new prime-location non-profits would become largely the preserve of middle-income households.

The housing program with the strongest case for continued existence is public housing. It provides benefits that many low-income

households cannot obtain elsewhere. The growth of demand for public housing will be somewhat restrained with the introduction of a housing allowance, especially if the rent scales are increased for consistency with the housing allowance. If rent scales as suggested above were used, rents for some public housing tenants would rise by at least one-third.

One complicating factor in the issue of changing or eliminating existing programs is the funding system. Currently the federal government shares the cost of the housing programs discussed here but does not share the cost of housing allowance programs. If RS and RGI subsidies are to be replaced by a housing allowance program, this system clearly must be changed.

VII SUMMARY

This chapter has examined the implications of the introduction of a housing allowance for three kinds of social housing programs: private rent supplement, public housing, and non-profit housing. All tenants in the first two programs, and rent-geared-to-income tenants in the third, pay rent according to a common rent scale. Virtually all tenants in public housing projects are subsidized, but in the other programs buildings have a mix of subsidized and unsubsidized tenants.

The evidence from Manitoba and British Columbia suggests that the housing allowance program has had little impact on their social housing programs. Specifically, in Manitoba the waiting list for family public housing has grown and its vacancy rate has declined. The same is true for elderly public housing in British Columbia. The opposite is true for elderly public housing in Manitoba, but this phenomenon is probably a sign of a general decline in the attractiveness of elderly public housing as the incomes of the elderly rise. In any case, apparently, public housing and private housing subsidized by a housing allowance are not close substitutes for the target groups.

In British Columbia and in Manitoba there have been no changes in the provisions of social housing programs as a consequence of the implementation of the housing allowance. It is argued here that the rent scale for RGI tenants in existing programs should be increased so that rent-to-income ratios for them are at least as great as the minimum ratio required to qualify for a housing allowance. Under this system, housing allowance recipients would still pay higher net rent than RGI tenants, but the differential would be much less than if the existing rent scales were left in place. One argument for not

increasing the rent of RGI tenants even more than this is that they are probably frequently required to consume characteristics such as newness, on which they place a low relative value, in order to obtain the characteristics that they do want, such as security of tenure. It would seem inequitable to force them to pay for characteristics that are the result of taxpayers' or bureaucrats' preferences, not their own.

Even if there were a substantial increase in RGI rent scales it is unlikely that the implementation of a housing allowance would have an immediate large impact on the occupancy of social housing, because of the costs of moving. Over the long term, however, it is quite possible that the underlying trend of falling occupancy in public housing for the elderly may be substantially exacerbated. These buildings may have to be renovated to provide the larger-sized units that the elderly prefer and are willing to pay for in the private market.

A housing allowance has been proposed by some as an alternative to existing social housing programs. Should these programs be eliminated when a housing allowance is implemented? For public housing, the answer is no, because public housing provides characteristics frequently unavailable to low-income households in the private market, whether subsidized by a housing allowance or not. The first of these is simply availability of accommodation. Public housing is the refuge of last resort. A single-parent mother whom landlords deem costly to serve may be denied suitable accommodation in the private market, especially if the market is tight. Public housing may be her only choice. Other special characteristics of public housing are assured quality and security of tenure.

The answer is less clear for non-profit housing. There is no evidence to support the proposition that low-income households regard income integration as a substantial benefit, and income integration is the major *raison d'être* of non-profit housing. But non-profit housing with income integration appears to be the only route for increasing the number of RGI social housing units in substantial numbers because of the resistance of municipalities and neighbourhoods to concentrations of poor people. For this reason the non-profit program should remain in existence. Some of the inequities associated with this program would be reduced if additional units were obtained by buying old buildings at less than prime locations rather than new ones at prime locations. In any case, a housing allowance program will provide some help, albeit probably small, to the newer non-profits by subsidizing those market-rent tenants with relatively low incomes. This may

especially help in the case of low-middle-income tenants whose income periodically falls because of short-term unemployment.

The case is strong for elimination of the private RS program when a housing allowance is implemented. Private RS does not provide the security of tenure that public housing and the non-profits do: the landlord may enter into an agreement that is as short as three years. Further, RS is not as available as other social housing to tenants who are costly to serve. The landlord has some say in the selection of RGI tenants and so will tend to choose the less high-cost ones. There does not seem to be sufficient advantage in private RS, as compared with a housing allowance, to offset its much greater cost.

NOTES

- 1 Two programs that are not examined might be especially affected by a housing allowance program extended to owner-occupiers: the Residential Rehabilitation Assistance Program (under part IV of the NHA) and non-profit co-operative housing (built under sections 15.1 and 34.18 of the NHA).
- 2 This excludes administration fees and the interest write-down on community-sponsored rent supplement units. Data are from Ontario Housing Corporation, Finance and Administration Division, *1979 Budgets, Rent Supplement Programs* (Toronto, 1978), p. 1.
- 3 It is two and a half times as great as the cost per recipient under the poverty line. Housing allowance costs are given in Table J2.
- 4 This is inferred from these data: on average each RS landlord had 24 RS units, and 62 per cent of a sample of landlords were either development companies (i.e. primarily involved in building) or development and property management companies (Ruston et al, 1979).
- 5 This is calculated from 1979 data. Rent is gross of utility surcharge; income is gross income, assuming the adult is working at the minimum wage (Archer 1979). Two other cases are of interest. For a single adult with three children, living on social assistance with an income of \$538 per month, the contribution rate is a mere 17.7 per cent. For a single elderly person with an income of \$343.37 per month (the sum of AS, GIS, and the Ontario income supplement for the elderly) the contribution rate is 21.8 per cent. These cases are also taken from Archer, 1979, Tables 2.1, 7.1, 7.3, and 7.5.
- 6 The RS housing expenditure is computed using the 21.8 per cent contribution rate given for a family of a single adult and one child with gross income in 1979 of \$492.50 (Archer, 1979). The RS unit rent of \$270 is the mean budgeted Ontario 1979 RS rent. The threshold rent of \$231 is the 33rd percentile rent in 1980 for one-bedroom rental units in Ontario areas of 100,000 people or more, computed from HIFE, 1980.
- 7 Specifically, projects under the National Housing Act, sections 40 and 43, are considered here. The great majority of units were built under section 43, which provides for loans from CMHC at the direct NHA lending rate to cover 90 per cent of capital costs; 50 per cent of operating losses are then covered by CMHC.
- 8 Information on this rating scale was obtained from Grant Warfield, Operational Planning, Ontario Ministry of Municipal Affairs and Housing. Fallis (1980, pp. 166-7) gives the earlier rating scale.
- 9 Ontario Housing Corporation costs are taken from Ontario Ministry of Housing,

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Ontario Housing Corporation, 1979 *Budgets, Assisted Rental Housing Projects - Metropolitan Toronto*. These costs are for 29,375 units. For the 12,585 units in the southern branch costs are much less: \$169 per unit (Ontario Ministry of Housing, Ontario Housing Corporation, 1979 *Budgets, Assisted Rental Housing Projects - Southern Ontario Branch*).

- 10 See the value of A in Table J2 for households below one-half the poverty line.
- 11 MTHC data taken from General Manager, 'Alternative Types of Housing Assistance for the Elderly,' memorandum to board of directors MTHC, 8 June 1979. The gross cost of \$173 is estimated by adding to the overall subsidy of \$113 per month an estimated contribution of \$60 (p. 15). For units built prior to 1976 the subsidy per month is only \$78 per month (p. 15); thus \$138 may be a better estimate of the same cost components as those included in the OHC lower bound estimate. Some of the enormous difference between OHC and MTHC costs is probably attributable to other factors, such as more efficient MTHC management, lower wages, and smaller units.
- 12 First, Fallis's estimate assumes, like most such estimates, that the income elasticity of demand and price elasticity of demand are both one in absolute value. It is now well-known (see chapter 4) that the elasticities for low-income groups are very much less than this. Thus the difference between the quantity of housing service provided to the recipient and the amount he would voluntarily consume after receiving a cash transfer equal to the resource cost of the RS subsidy is greater than Fallis's estimates assume. Second, Fallis's estimate assumes that housing service is homogeneous. Yet a recipient might value, say, an RS unit with a cost of \$300 per month at substantially less than another unit renting for the same amount. The alternative unit might be in an older, badly maintained, smaller building but have more space and greater security of tenure. The evidence of chapter 2 and the characteristics of RS units suggest that this possibility is likely. In particular, the evidence of chapter 2 suggests that space demanded rises with income more than does the level of maintenance while RS units are apt to have relatively very good maintenance but relatively little space.
- 13 Those leaving EPH and on SAFER represented only 13 per cent of all vacators (where total vacators exclude those associated with deaths and moves out of province) during this period (Minuk and Davidson, 1981, p. 38). Those leaving family public housing and applying for SAFFR represented only 10 per cent of all vacators (Minuk, 1982, p. 40). The percentage of units accounted for by SAFER and SAFFR leavers given in the text may be an overstatement because numbers leaving are given in terms of people, not units. The number of EPH units - 6,932 - was obtained from Jim Zamprelli, MHRC, and the number of family public housing units - 2,986 - from Eric Wilson, Winnipeg Regional Housing Authority.
- 14 In Calgary, 16 per cent of the waiting list for elderly public housing refused to respond to a survey on the grounds 'that current housing was satisfactory but that their name had been put on the list "just in case" housing was needed at a later date'. Further, 25 per cent of the waiting list could not even be contacted because of a change of address (Alberta Housing and Public Works, 1977).
- 15 Clearly there is some arbitrariness in the way the component reasons have been classified here. In addition, comparability is damaged by the different structure of the three questionnaires. This is most severe for British Columbia; it is quite possible that 'housing bundle reasons' (given as 'housing quality' in the BC report) include security as a component.
- 16 That is, 19.5 per cent of the names on the combined lists for FPH, rent supplement, and mixed family public housing for the period January 1981 - May 1982 had applied for SAFFR. A lower proportion than this, only 15.5 per cent, of applicants determined to be ineligible for public housing had applied for SAFFR. (Reasons for ineligibility include inability to care properly for a dwelling unit and accumulated

- rent debt to the Winnipeg Regional Housing Authority (Minuk, 1982, pp. 37-81.)
- 17 The BC waiting list survey explicitly asked: 'Single people are generally allocated a bachelor suite when they move into a government-assisted housing project. A bachelor suite would have a sleeping alcove separated from the living area by a curtain or screen, plus a kitchen. Would you accept this type of unit in preference to your present accommodation?' (British Columbia, Ministry of Municipal Affairs and Housing, Research Staff, 1978). Bachelor units are also the standard for single people in MTHC projects, but single persons are allowed one-bedroom units in OHC projects (Municipality of Metropolitan Toronto Planning Department, 1979).
- 18 More precisely, the average number of rooms per person for households with head aged 65 or over in 1980 was 3.7 for those with 1979 household income of less than \$4,000 and 3.1 for those with 1979 household income of \$4,000 - \$7,999 (Statistics Canada, 1982, Table 3.3). These global data and their contrast with the conditions of public housing tenants are consistent with the situation of housing allowance recipients in Manitoba. Single SAFER recipients averaged 540 square feet of living space, 63 per cent more than a Manitoba EPH bachelor suite that Minuk and Davidson use as an example, and couples averaged 700 square feet, 65 per cent more than a one-bedroom EPH suite (Minuk and Davidson, 1981).
- 19 More precisely, the average number of rooms per person for households with head under age 35 and 1979 income of \$4,000 - \$7,999 is 1.85, and with 1979 income of \$8,000 - \$11,999 is 1.92 (Statistics Canada, 1982, Table 3.1). These households include non-family households. Table 8 above shows that among renting family households in Ontario in large urban areas, 14 per cent below the poverty line did not have at least one bedroom for every two persons.
- 20 This information is from Municipality of Metropolitan Toronto Planning Department, 1979, and Canada, Task Force on CMHC, 1979. Exceptions to these rules are allowed (Thompson and McCulloch, 1978, pp. 11, 12).
- 21 Address of Richard Peddie, Cityhome director of planning, to Faculty of Family and Consumer Studies, University of Guelph, March 1983.
- 22 Essentially the major reason for this is the fact that owners of rental buildings are taxed on nominal capital gains only when realized and only at one-half income tax rates, while nominal interest costs are fully deductible. (See Steele (1982), especially note 10, for an expansion of this point.) The extent of the subsidy depends on the extent to which the subsidy is shifted from landlords to tenants. (For discussion of shifting see Musgrave and Musgrave (1980).) Further, owner-occupiers are also beneficiaries of tax expenditures. At the very least, however, so long as the tax expenditure to landlords is at least partially shifted, renters who prefer a large amount of housing are subsidized relative to those who prefer little.
- 23 One reason for below-equilibrium rents might be the existence of rent review. But in Ontario only units built before 1976 are subject to rent review. Additionally, the extent of the constraint on market rent on pre-1976 units is reduced by the allowed pass-through of the cash flow cost of mortgages taken out on existing buildings when these buildings are sold, although this pass-through was constrained by legislation in late 1982. Arnett concludes: 'While it appears likely that controls have had an impact on Ontario's housing market, this impact has not been so substantial that the changes in the market from 1975 to 1979 could not be explained by other factors' (1981, p. 107).
- 24 In Manitoba about 3,000 non-profit units are found in buildings that have a very low rent structure due to the fact that they were built at a time when unit costs were much lower. Their mortgages are now paid off' (Minuk and Davidson, 1981, p. 39).
- 25 They are covered under section 44.1b of the NHA, whereas private rent supplement is covered under 44.1a.
- 26 One resident of a non-profit has assessed the negative externalities as follows: 'We

- like the location very much and I think the idea of the development is really fine. But I wonder when I see the kids around here. We have definitely middle class values. We put a high value on social activities - apart from hanging around the neighbourhood store - and on things like school achievement. There's a 14-year-old girl who's quit school. I don't know if we want our 13-year-old to get that kind of influence. I don't know yet' (Godfrey, 1980).
- 27 Thompson and McCulloch, (1978, Table 3.12). They note that a very low proportion of non-profits levied rent surcharges on relatively high-income tenants, despite their obligation to do so.
 - 28 In Manitoba, 2,966 or 81 per cent of non-RGI non-profit units (presumably confined to the elderly) had rents so low that 'tenants are disqualified from SAFER benefits on the basis of low rent to income ratio' (Minuk and Davidson, 1981, p. 39). (The lower bound on income for almost all elderly would be set by OAS plus GIS plus the maximum of Manitoba's income supplement, MSP.) Of the remaining non-RGI units only 14.5 per cent had tenants receiving SAFER (Minuk and Davidson, 1981, p. 39).
 - 29 Dennis and Fish (1972, p. 233). Strictly speaking, limited-dividend projects are not non-profits, but they are usefully lumped together with non-profits for the purpose of analysis (see Fallis, 1980).
 - 30 Possible reasons are inconsistency in the charging for utilities and misapplication of the scales (Thompson and McCulloch, 1978). Another possibility is that incomes reported to the survey were underreported more than income reported on the rent supplement form.
 - 31 This is not precisely true. Ontario has placed a limit on the losses in section 56.1 housing that it will subsidize (Municipality of Metropolitan Toronto Planning Department, 1979).
 - 32 This inference may be rash. First, the main implication of these data may be that poor families are simply less willing to pay for good maintenance than are poor elderly households. Second, perhaps in most instances, those poor families occupying poorly maintained dwellings knew of the conditions before initial occupancy, and perhaps in many instances a poor family would actually welcome a quality deterioration if it is accompanied by a drop in real dollar rent. Yet there are still likely to be some poor families who would not welcome quality deterioration in these circumstances.
 - 33 Of course it is illegal in Ontario for landlords to discriminate against applicants on the basis of race (although not on the basis of children), but such laws are not always observed, probably especially by the managers of small projects.
 - 34 Some indication of the benefit conferred by availability is the testimony of the Children's Aid Society that some children leave their families and are admitted into CAS care because of the unavailability of housing (Children's Aid Society of Metropolitan Toronto, 1980). Further, unavailability adds to social work costs: 'Our awareness of the wide-ranging effect of housing availability and conditions on family life and functioning has meant that Children's Aid Society workers often spend large amounts of time assisting families to secure acceptable housing' (1980, p. 2).
 - 35 A major exception to this point is eviction because of a change in household status. For example, a non-elderly single-parent mother whose children leave home is no longer eligible for public housing and is evicted.
 - 36 This is the view of City of Toronto Planning and Development Department (1982), the source of the data. For examination of rent review see Arnott (1981).
 - 37 Data are from City of Toronto Planning and Development Department (1982). Sites with rental buildings can usually be used for condominiums only through demolition. 'Since October 1974 ... in almost all cases Council has refused to permit conversions and has linked any reconsideration of this policy to attainment of a Metro-wide rental vacancy rate of 2.5%' (City of Toronto Planning and Development Department, 1982, p. 14).

- 38 In addition to sources given in Table 30, Alberta Housing and Public Works (1977) was used. Some bias in the comparison exists because the Toronto questionnaire explicitly included all the categories indicated in the text but the Alberta questionnaire explicitly included only 'better safety and security.' However, the Toronto survey took place at a time when renovation and demolitions of purpose-built apartment buildings were relatively infrequent (for indications of the timing of this activity see City of Toronto Planning and Development Department, 1982).
- 39 According to the draft report of the OHC Committee of the City of Toronto's Committee on Neighbourhoods, Housing, Fire and Legislation, 'The Sub-Committee was surprised to hear the strength of opinion, again unanimous, against integrating Ontario Housing on the basis of household income either all at once or even by attrition.'
- 40 Petition of Mrs Myrna Wolfe on behalf of the Canlish Tenants to the Committee on Neighbourhoods, Housing, Fire and Legislation.
- 41 See landlords' perceptions in Ruston et al (1979).
- 42 This rationale for income integration seems to be the only one consistent with one of the provisions of section 44.1b of the NHA. This provision allows more than 25 per cent of a project to be certified as rent supplement when the project is in a low-income neighbourhood (Thompson and McCulloch, 1978). If income integration *per se* were the goal, then instead of exceeding the standard 25 per cent, projects would be required to have fewer than 25 per cent RS, in low-income neighbourhoods.
- 43 The vacancy rate in October 1981 for rental buildings with six or more units was 0.3 per cent in Toronto, 0.6 per cent in Ottawa, and 0.7 per cent in Hamilton (*Canadian Housing Statistics*, 1981, Table 18).
- 44 The actual proportion of low-income assisted housing in Toronto, a market with a very low vacancy rate in recent years, is over 10 per cent of the rental market. Low-income assisted housing units were 45,000 in Metropolitan Toronto alone in 1979 (Municipality of Metropolitan Toronto Planning Department, 1979, p. 1), and in 1981 there were 453,000 rental units in the whole CMA (*Canadian Housing Statistics*, 1982, Table 101).
- 45 In fact, Muth makes this argument for blacks and whites rather than for poor and middle-income people. Note also that the argument assumes that for the bundle of characteristics (other than nearness to a poor person) embodied in a unit, a poor person would be willing to pay as much as a middle-income person. This is not unlikely in some circumstances: a poor person sharing with three others might be willing to pay as much for a standard two-bedroom apartment as a middle-income person living alone.
- 46 Of course, low-income households will also tend to live in different areas from high-income households because income affects the desired housing bundle and the distance from the centre of the city (see Muth [1969] for expansion of this point).
- 47 1971 Census, *Toronto Census Tract Bulletin*. A census tract has a population of 2,500 to 8,000, except for tracts in the central business district and for institutional tracts.
- 48 Computed from the map in Manitoba Housing and Renewal Corporation (1981). The number of moves into postal code areas was slightly less than the number of moves out, suggesting that Winnipeg experienced a net out-migration among allowance recipients who moved while in the program.
- 49 I am grateful to Professor Henry Rempel of the University of Manitoba for informing me of the socio-economic status of the various postal code districts.
- 50 As of December 1978, seven years after the start of rent supplement in Ontario, about 13 per cent of landlords had cancelled some or all of their RS units (Ruston et al, 1979, p. 11).

8

A housing allowance as part of the existing social security system

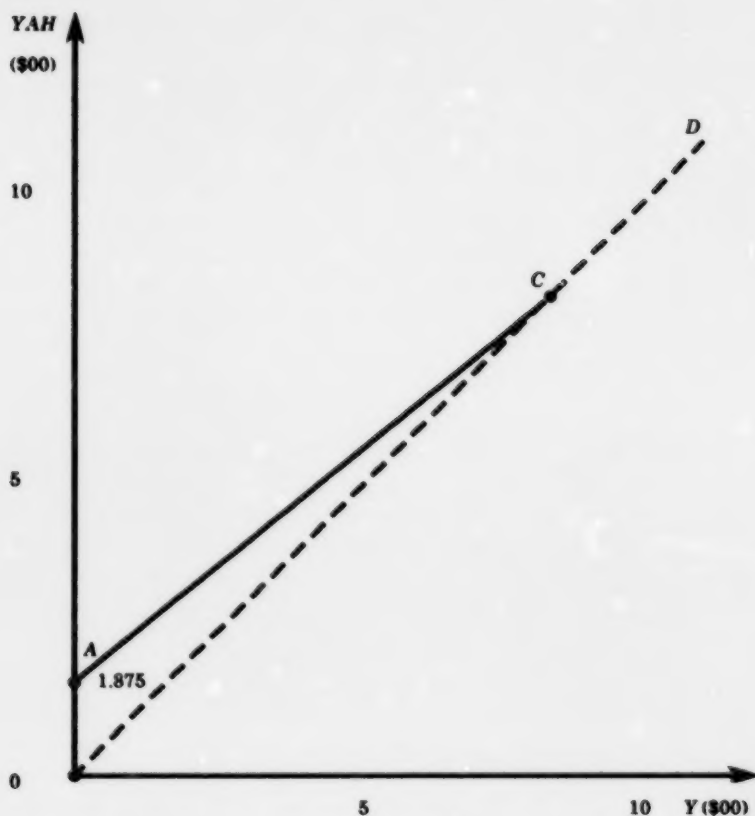
I INTRODUCTION

An income-conditioned percentage-of-rent housing allowance redistributes income to help those in need. For this reason an ICPOR housing allowance may be viewed as part of the income security system. This chapter examines the ICPOR allowance in this role. The nature of the allowance as a negative income tax is explicitly analysed in section II. Section III considers inefficiencies generated by an ICPOR arising from its work disincentives and saving and wealth portfolio effects. Section IV considers the problem of integrating the ICPOR with existing income security programs, particularly the Guaranteed Income Supplement and Unemployment Insurance. This discussion is followed, in section V, by an assessment of the likely impact of an ICPOR allowance on work, saving, and portfolio allocation. Section VI is a summary and conclusion.

II THE ICPOR ALLOWANCE AS A NEGATIVE INCOME TAX

An ICPOR allowance is a negative income tax with two features that set it apart from the standard negative income tax. First, it has as a qualification requirement the expenditure of a set proportion – 30 per cent in British Columbia – of income on rent. This would disqualify very few renters below half the poverty line but would disqualify well over 10 per cent below the poverty line (see chapter 6). A second unique feature of an ICPOR is that its support level – the amount of the allowance when income is zero – depends on the rent paid by a recipient, up to the threshold rent. The effect of an ICPOR on the disposable income of a recipient is illustrated in Figures 6(a) and (b).

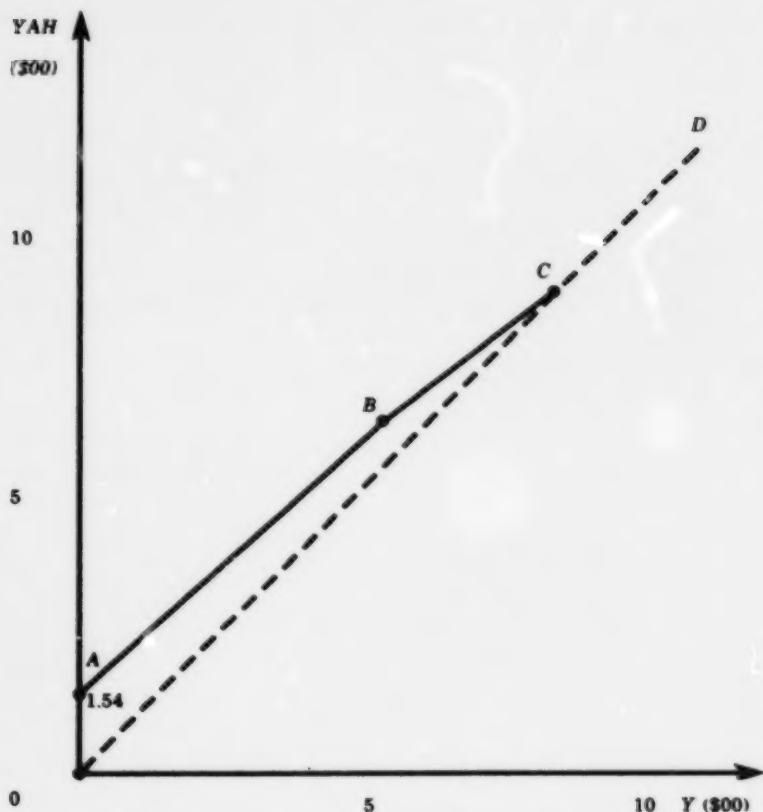
FIGURE 6a



The housing allowance is assumed to be one with BC parameters (except that the BC maximum payment constraint is omitted). The payment, A , is given by

$$A = 0.75(R - 0.30Y) \text{ if } R \leq R^*, A > 0, \text{ and } A = 0.75(R^* - 0.30Y) \text{ if } R > R^*, A > 0, \quad (9)$$

FIGURE 6b



where R is actual rent, R^* is threshold rent, and Y is income. It can be seen that the housing allowance becomes zero when income reaches $R^*/0.3$; this is called threshold income. For R^* equal to \$250, for example, threshold income is \$833 per month.

In both panels of Figure 6, the income of the recipient before the housing allowance is measured on the horizontal axis, and YAH , the income of the recipient after receiving the housing allowance, is measured on the vertical axis. It is assumed that R^* is \$250, so that

threshold income is \$833, and accordingly income before and income after the allowance are the same once Y reaches \$833 per month. Thus, after Y reaches \$833, at C , the relation of Y and YAH is shown by the 45-degree line.

In panel (a) of Figure 6 it is assumed that the recipient's rent is at the threshold rent level, \$250. Thus, for $Y \leq \$833$

$$YAH = Y + A = Y + 0.75R^* - 0.225Y = \$187.50 + 0.775Y. \quad (10)$$

It will be noticed that the negative income tax rate is 22.5 per cent - that is, A falls by 22.5 per cent of any increase in Y - and the support level is \$187.50. In Figure 6(a), line segment ACD gives YAH as a function of Y ; it shows that YAH is \$187.50 when Y is zero, with YAH rising by only 77.5 per cent of any increase in Y , because of the \$0.225 fall in A when Y increases by \$1. When Y is \$833 the allowance is zero and so YAH and Y are the same.

Panel (a) assumes that recipients, no matter what their income, pay rent of R^* , i.e. that the income elasticity of rent is zero. This is not very far from the truth, according to the evidence of recent studies (Steele, 1979; Hanushek and Quigley, 1979), but an alternative assumption even more consistent with the elasticity evidence is that

$$R = \$190 + 0.1YAH. \quad (11)$$

In this case¹ the post-allowance income of the recipient, for $R < R^*$, is derived by substituting (11) into (9). This gives

$$YAH = Y + 0.75(190 + 0.1YAH - 0.3Y) = \$154.05 + 0.8378Y. \quad (12)$$

For $R \geq R^*$, from (10), $YAH = \$187.50 + 0.775Y$. When $R^* = \$250$, the breakpoint, i.e. the point where $R = R^*$, occurs where $YAH = \$600$ and $Y = \$532$, and the relationship between Y and YAH is given² by (12) for $Y < \$532$, by (10) for $\$833 > Y \geq \$532$, and by $YAH = Y$ for $Y \geq \$833$. The relationship between Y and YAH is illustrated in Figure 6(b).

It can be seen from (12) that the support level, \$154.05, is lower here than in the simple case (see [10]). This is the outcome, of course, of the variable-rent assumption given by (11) which means that the lowest-income recipients pay less than R^* in rent. Another consequence of the positive income elasticity of rent is the relatively low negative

income tax rate of these recipients. It is 16.22 per cent, as compared with the 22.5 per cent rate indicated by (10). In effect, the positive income elasticity reduces the negative income tax rate. When the recipient's income rises he escapes part of the negative income tax by increasing his rent payment at the same time. In detail, this happens as follows. Assume an income increase of \$100. Its initial impact will be (from [11]) an increase in rent of \$10 and (from [9]) a drop in the allowance of \$15. (In the absence of any increase in rent associated with the income increase, the allowance would drop by \$22.50.) There will be, however, a second-round impact arising because of the impact of the reduced allowance on total income and accordingly on rent. Ultimately, the reduction in the allowance will be \$16.22.

The lower the income elasticity of rent the less is the negative income tax reduced by the dependence of rent on income. For instance, if $R = \$220 + 0.05YAH$, the negative income tax rate falls only to 19.5 per cent, not 16.22 per cent. It is also important to note that (12) gives YAH only for $R < R^*$. When $R = R^*$ and $R^* = \$250$, then, from (13), $YAH = \$600$, $Y = \$532$ (point B in Figure 6(b)), and the recipient cannot escape any of the negative income tax by increasing his rent. It can be seen that so long as the appropriate model is one in which rent is a function of income, with rent reaching R^* at some point after zero income but before threshold income, the housing allowance is one with an effective negative income tax rate below 22.5 per cent (more generally, below f in equation [3a]) for the lowest incomes and at 22.5 per cent (more generally, at f) for higher incomes.

It is very important when assessing the significance of this to remember that this model can hold only approximately on the average. It will predict badly for any individual because the variation in rent paid at a given income level is great, relative to the variation in rent associated with income variation, among low-income households (see the R^2 in Steele, 1979). Further, as has been emphasized in earlier parts of this monograph (see Appendix A for evidence), much of the observed variation in rent is associated with variation in the price of housing service, not variation in the quantity of housing service. As a consequence, a recipient deliberately attempting to reduce the negative income tax associated with an income increase by marginally increasing his rent and his housing consumption might find it very difficult to do so.

Granted these warnings about overemphasizing (12) as compared with (9), it still deserves comment. A negative income tax rate is associated with undesirable work and saving disincentives, and (12) shows that a housing allowance, because of its partial dependence on rent paid, reduces the effective average negative income tax rate. Thus in Figure 6(a) the negative income tax rate is 22.5 per cent from 0 to C , but in Figure 6(b) it is just 16.22 per cent from 0 to point B (where $Y = 532$) and is 22.5 per cent only from B to C . The role of R^* also means that generally, as in Figure 6, there is a lower effective negative income tax rate for lower-income households than for higher-income households, an attractive property on income distribution grounds.

The level at which R^* is set will determine the extent to which the housing allowance is like a standard negative income tax. For households with rent greater than R^* , i.e. in Figure 6, for households with $Y > 833$ and so to the right of point C , the housing allowance is an ordinary negative income tax. The lower R^* , the lower will be point C and so the greater the number of households for which the allowance is merely a negative income tax. The higher R^* , the higher is threshold income (i.e. break-even income), the greater is the number of eligible households, and the longer is the stretch over which the effective negative income tax rate is reduced by the increased-rent effect. Finally, the higher the contribution rate and the higher the percentage of gap, the higher the negative income tax rate.

A case can be made for the attractiveness of a housing allowance as a negative income tax on grounds other than those having to do with work, saving, and portfolio incentives. These grounds have to do with 'welfare stigma'.²³ One of the reasons for the low participation rate (Hum, 1981) in standard negative income tax schemes is this stigma. In the case of a housing allowance the stigma may be less because the payment amount and the selection of beneficiaries depend not only on income but also on the amount of housing expense. Eligible recipients and taxpayers may regard high housing expenditure as, to a substantial extent, beyond the control of household and/or in some sense virtuous, while they may not have the same view of low income. If so, there will be less stigma associated with a payment going only to those with rent greater than, say, 30 per cent of income than with one going to those who are merely poor.

III DISINCENTIVES ASSOCIATED WITH AN ICPOR

Work disincentives

In the previous section, reference was made to undesirable work and saving disincentives associated with a negative income tax rate. In this section these are examined further. They occur in the ICPOR housing allowance just as they do in any negative income tax and, more generally, just as they do in any income-conditioned cash transfer. They arise because the allowance falls by fY dollars – \$0.225 in British Columbia – for every dollar increase in income. Other things being equal, an extra hour of leisure costs the recipient f times his hourly earnings – 22.5 per cent of his hourly earnings in British Columbia – less than it did before the allowance program was in effect. This is an encouragement for the recipient to substitute leisure for work – to work less. Further, there is an additional dampening of work effort if there is a tendency for people to reduce work effort when they get richer. In this case the housing allowance, because it increases income, will reduce work effort quite apart from the substitution effect of its negative income tax.

How important are these effects? A multitude of studies have measured the effects of income-conditioned cash transfers on work effort,⁴ and in general the conclusion is that they reduce work effort, but not by very much. For instance, the New Jersey Negative Income Tax Experiment found that the negative income tax reduced the hours worked each week of white husbands by 6 per cent (Hum, 1979). In this experiment the guarantee levels (from 50 per cent to 125 per cent of the poverty line) were much higher than they would be in an ICPOR, and the tax rates were also much higher (0.3 to 0.7). Thus an ICPOR might have an effect of only a very few percentage points on the work effort of male heads. Most studies find a much stronger percentage effect for wives than for husbands, but their work effort (among very-low-income families) is not very great to start with. The effect for female heads is ambiguous: the Gary Income Maintenance Project found results ranging from an increase of 2 per cent for families not previously recipients of Aid to Families with Dependent Children to a decrease of 5 per cent for families who were previously AFDC recipients (Hum, 1979). The Seattle-Denver experiment, however, found a decrease of 11 per cent (Hum, 1979). Studies of the effect of the AFDC on female heads cited in Danziger, Haveman, and Plotnick (1981) found marginal effects of changes in guarantee level

and in tax rates that are greater than those implied by these negative income tax experiment results. Overall, the effect of an ICPOR on hours of work is probably negligible for intact families but may be fairly substantial for single-parent families.

The possible impact of an ICPOR on hours of work is a reason for favouring the variable-contribution-rate (VCR) ICPOR discussed above in connection with household splitting. Under this plan, the typical elderly person, a single, would have a contribution rate of 40 per cent and so a tax rate of 30 per cent if the percentage of rent were 75. But the typical young family head, a single-parent mother with two children, would have a contribution rate of 25 per cent and so a tax rate of only 18.75 per cent. Now virtually all elderly eligibles are out of the labour force and accordingly unaffected by work disincentives, while most young family heads are in the labour force, and so this is a desirable tax pattern. However, if the ICPOR were extended to categories other than families and the elderly, the work-incentive advantage of the VCR proposed here would not be so clear-cut: prime-age poor singles would have a tax rate of 30 per cent. But if work incentives are a problem, parameters could be varied by age: for instance, if for singles under age 45 the ICPOR contribution rate were set at 40 per cent but the percentage of gap at 50, the tax rate would be 20 per cent.

Saving and portfolio allocation disincentives

A second set of incentives associated with the tax rate in ICPOR is associated with saving and portfolio allocation. There is an incentive for households to consume all their income when their income is relatively high rather than to save some of it for times when their income is relatively low. Both the life-cycle and the precautionary motives for saving will be affected: saving for both retirement and for temporary spells of unemployment may fall.

The bulk of evidence is that the overall saving effect is very likely to be negligible, although there is considerable uncertainty about its size, especially for precautionary saving.⁵ A difficulty with studies on transfers for non-retirees is that the bulk of evidence relates to financial rather than non-financial saving. It seems likely, *a priori*, that much of the effect would be to increase savings held as non-income-yielding assets such as consumer durables while reducing income-yielding savings, because the former would not affect countable income in the housing allowance formula and, accordingly, the

amount of the allowance. The portfolio reallocation toward consumer durables would be particularly strong where an income security program includes an asset condition as well as an income condition, if consumer durables were excluded from counted assets. Various asset conditions do exist in other income and housing programs: family benefit recipients in Ontario may not have more than a few thousand dollars in liquid assets; tenants of the Metropolitan Toronto Housing Company pay a rent based partially on the amount of their assets. A housing allowance program, such as those in Manitoba and British Columbia, with no asset test⁶ but with income earned by assets included in countable income would have some effect on portfolio allocation but less effect than programs with an asset test.⁷

One possible portfolio reallocation deserves special mention. A housing allowance only for renters contains clear incentives to reduce saving, in the form of the accumulation of home equity, and to re-allocate housing assets. In the case of owner-occupiers without a mortgage, these incentives probably only partially offset the tax incentives for home ownership (see Table 9, above), so that the net effect is probably more efficient than in the absence of a housing allowance system. For young tenants with low net worth and a high time preference, however, a housing allowance only for renters may represent a substantial disincentive to home ownership.⁸ This in turn may reduce the savings of low-income households, because of the forced saving associated with house purchase. Indeed, this is a major rationale for extending a housing allowance to home owners as well as to renters.

IV INTEGRATING A HOUSING ALLOWANCE WITH OTHER INCOME SECURITY PROGRAMS

An often neglected issue associated with a housing allowance program is its integration with existing social security programs. This issue is important because although the work and saving disincentives of an ICPOR alone may be small or negligible, they may not be when an ICPOR is added to existing programs.

One approach to this problem would be to: include in the countable income for a housing allowance the benefits from general income security programs (a procedure called 'sequencing'); exclude from countable income benefits for special needs, such as subsidies for prescription drugs; and deduct from the allowance the benefits from any other program considered to have the same general goals. The general

principles indicated here guided policy in the Mincome Manitoba negative income tax experiment (Hum, 1981)⁹ and are followed in general by Canadian housing allowance programs. For instance, Old Age Security, the Guaranteed Income Supplement, and Unemployment Insurance benefits are all included in countable income; subsidies for specific needs, such as day care, are not; and benefits received under other rent-conditioned cash transfer programs are, in effect, deducted from housing allowance benefits.¹⁰ Two exceptions to these general principles are of particular interest. First, occupants of non-profit housing do not have the difference between the rent they pay and the market value rent of their unit deducted from their benefits; and it is not included in income.¹¹ This may not be of much quantitative importance if the only non-profit occupants receiving the housing allowance are tenants of recently built non-profit projects where the rent paid by non-g geared-to-income tenants is in fact market rent or very close to it. Second, Manitoba excludes social assistance recipients from its family housing allowance plan. This is in effect the same as deducting social assistance benefits from the housing allowance benefits. It is somewhat inconsistent with the policy of including GIS payments in countable income rather than deducting them from the benefits.

Elderly recipients and the total tax rate

It is instructive to examine the effect of these principles on the total income tax rate of particular classes of eligibles. First consider an elderly person. The major income-conditioned supplement in this case is the Guaranteed Income Supplement. The tax-back on ordinary income, YO , in this plan is 50 per cent, so that GIS income is given by $GIS = GIS_G - 0.5YO$, where GIS_G is the GIS support level. Then, using the parameters of the BC housing allowance, for households paying rent R (assumed here and later to be less than R^*) the housing allowance is given by

$$A = 0.75 \left[(R - 0.3(YO + GIS)) \right] \therefore A = 0.75R - 0.225GIS_G - 0.1125YO, \quad (14)$$

where YO is assumed to be less than twice GIS_G . The total of GIS and A is thus $0.75R + 0.775GIS_G - 0.6125YO$. Thus it can be seen that sequencing yields a total tax-back rate for the vast majority of recipients of 61.25 per cent. If the housing allowance program were

simply stacked onto the GIS the total tax-back would be 72.5 per cent (50 per cent plus 22.5 per cent). Alternatively, if the GIS were regarded as having the same general goals as the housing allowance, GIS recipients would not be beneficiaries and the total tax-back rate would remain at 50 per cent. Proposals put forward by Krashinsky (1981) would also leave the tax-back at 50 per cent, but would accomplish this by being much more generous than the existing program. Specifically, Krashinsky's proposal implies deducting from countable income a portion of the reduction in benefits caused by the tax-back in the GIS.¹² A proposal intermediate between sequencing and Krashinsky's proposal in its effect on the tax-back is that of Tucker (Heinberg, Culbertson, and Zais, 1974) to tax transfer income at a higher rate than non-transfer income. For example, GIS income could be taxed back at 1.5 times the tax-back on ordinary income. In this case the net tax-back in ordinary income for the allowance would be 5.625 per cent, half the level in current programs; and the total tax-back rate would be 55.625 per cent.¹³ The total benefit received by a recipient of GIS and the housing allowance would, of course, be lower under this system than under the sequencing system currently used.

This analysis and that for family recipients, below, assume that the income elasticity of rent is zero. If this is replaced with the assumption that rent is dependent on income, using the specific assumptions in (10), the total tax-back in all cases is reduced because of the recipient's partial escape of tax by increasing rent when income rises. For example, under the first procedure (sequencing), for an eligible paying rent less than R^* the total of GIS and A is¹⁴ $154.05 + 0.8378GIS_G - 0.5811YO$, so that the total tax-back is 58.11 per cent, not the 61.25 per cent implied by the assumption that rent has a zero income elasticity.

Family recipients and the total tax rate

Consider next a family head. A major income security program for her is Unemployment Insurance. Suppose that in the previous accounting period the proportion of time employed is w_1 and the proportion unemployed is w_2 ; let earnings per accounting period when employed be YE and let these earnings be below the UI maximum insurable earnings. Then, using the BC housing allowance parameters and assuming sequencing, the allowance payment is given by $A = 0.75(R - 0.30(w_1YE + w_20.6YE)) = 0.75R - 0.225w_1YE - 0.135w_2YE$, where the UI rate is 60 per cent of employed earnings. Thus an

allowance recipient who remains unemployed for an extra month instead of working suffers a reduction of income of 40 per cent because of UI provisions alone, but after the partially offsetting increase in her housing allowance, the income loss is just 31 per cent;¹⁵ in effect the total tax-back on earnings is 69 per cent.

V LIKELY OVERALL EFFECTS

The elderly

What can be concluded about overall work, saving, and portfolio allocation effects of an ICPOR housing allowance? First, in the case of elderly recipients there is clearly, because of their circumstances, little cause for concern about work incentives. Second, the effect of the incentive for reducing saving because of the combined effect of the GIS and housing allowance formulas is probably not very great for two reasons: the total reward for consuming rather than saving is collected only by those who spend a high fraction of a low income on rent, and the amount of the housing allowance reward is quite small. To see this point, ask the question: would many husbands reduce their savings because, without the income yielded by these savings, their widow would live at about the poverty line and so be eligible for about \$50 a month in assistance? Further, savings held as equity in owner-occupied housing are totally unaffected by the GIS tax-back, and most savings of low-income elderly households are held in this form.

The non-elderly

There is more cause for concern in the case of the non-elderly because the total tax-back for a housing allowance recipient receiving UI is very great. However, there are many conditions that must be fulfilled for initial and continued eligibility for UI, and there is a time limit on benefits. Whether UI benefits substantially reduce work effort is a matter of some controversy (Grubel, Maki, and Sax, 1975, and Kaliski, 1975, take opposing views). In any case, for a person receiving both UI benefits and a housing allowance the effect of the housing allowance on total tax-back is tiny compared to the effect of UI; the problem, if there is one, is with UI, not the housing allowance.

The existence of a housing allowance program might make it easier to reduce UI benefits as a proportion of previous earnings. Thus the UI-induced work disincentive might very well ultimately be *reduced* by the introduction of a housing allowance program for many groups of

recipients. One such group is primary workers in rural areas, where rents are low and where owner-occupied dwellings with low mortgages are the norm. Another is young singles, for whom the R^* and the percentage of gap might be set at low values.

There is also some reason to suppose that the introduction of a housing allowance for those eligible for family benefits might actually increase work effort. This can be seen as follows. Recipients of Ontario's General Welfare Assistance (GWA) and Family Benefits Assistance (FMA) already receive an ICPOR-type housing allowance as part of their total monthly benefit. In the case of a single-parent mother with two children it is given by¹⁶ $A = 0.75 (R - 0.328Y)$ if $R \leq 273$ and $A = 0.75 (273 - 0.328Y)$ if $R > 273$, where Y is FBA net of the allowance, for an FBA recipient with no earned income; Y in late 1981 was \$549. This housing allowance is not available, however, for FBA recipients who enter full-time employment. Instead, for a single-parent mother with two children the total FBA benefit is $180 - 0.5 (YE - 667)$, where YE is earnings. It can be seen that the tax-back is 50 per cent and the threshold or break-even monthly income is $\$(180 + 0.5 \times 667)/0.5$, or \$1,027. A housing allowance with a percentage of gap of 75 per cent, a contribution rate of 25 per cent (and so a tax-back of only 18.75 per cent), and a threshold rent of \$273 would yield higher benefits than the FBA for a household close to the FBA break-even income and paying a sufficiently high rent. As a consequence, some rational households would switch from FBA to the housing allowance program and in so doing reduce their tax-back to 18.75 per cent as compared with 50 per cent under FBA. This lower tax-back may be expected to increase work effort.

In addition, the existence of a housing allowance might encourage some persons eligible for large benefits from FBA and GWA to take the housing allowance instead, even if the latter is smaller, because of its lesser welfare stigma and the lesser psychic and time cost of application. This in turn might increase work effort because of the much lower tax-back in a housing allowance program than in the FBA and GWA programs. The housing allowance alternative might be particularly attractive to those who have exhausted UI and anticipate a return to work in the near future.¹⁷

VI SUMMARY AND CONCLUSION

An ICPOR housing allowance may be regarded as a negative income tax with two unique features: a requirement that recipients spend a

set percentage – 30 per cent in British Columbia – of income on rent, and a support level that depends on rent paid, up to a threshold rent level. Like any negative income tax, the ICPOR allowance has a tax-back rate. In the first instance it is equal to the product of the percentage-of-gap parameter and the contribution rate parameter – i.e. it is f in (3a) – and accordingly it may be changed by changing either of these two plan parameters. When account is taken of the impact of increased income on rent, the tax-back rate in the ICPOR is less than f , so long as the income elasticity of rent is positive. In other words, when income increases a typical recipient will in effect escape part of the tax-back by increasing housing expenditure: the reduction in the allowance resulting from an income increase is partially offset by an increase in the allowance resulting from a rent increase. This offset will occur up to the point where rent is equal to threshold rent, so that the lower the threshold rent, the fewer households will have a tax-back rate lower than that indicated by f . Also, the size of the offset for any individual depends on that individual's behaviour – unlike the impact tax-back – and thus the variability in housing behaviour implies variability in the tax-back offset.

Because of the presence of the tax-back in the ICPOR allowance, it will tend to distort work, saving, and portfolio allocation behaviour. Evidence from many studies suggests that the size of the tax-back rate in the ICPOR alone would have a trivial impact on the work effort of the heads of intact families, but a small and possibly non-trivial impact on that of single-parent mothers, probably a more sizeable group in a housing allowance program than two-parent families. Available studies also suggest that the impact of the ICPOR on saving would be very slight. These studies, however, very largely concern themselves with financial saving. The effect of an ICPOR on the accumulation of home equity might be non-trivial if an ICPOR were not extended to family owner-occupiers. A justification for supposing that saving and work disincentives even for single-parent mothers are likely to be too small to be of concern, is the short stay in the program of the typical family recipient in Manitoba.

What would be the impact of a housing allowance program if it were coupled with other income security programs? The answer depends on the integration rules. Assume that, as in existing Canadian housing allowance programs, benefits from other income security programs are included in countable income and that benefits from other programs having the same purpose are deducted from the allowance. This

results in a greater total tax-back rate than in the system suggested by Krashinsky (1981) or that suggested by Heinberg, Culbertson, and Zais (1974). In particular, it implies, in combination with the GIS, a tax-back of 61.25 per cent on ordinary income (ignoring the offset provided by increasing rent when income increases); and in combination with UI benefits, a total tax-back of 69 per cent. Despite this, in the case of the elderly the combined effect of the GIS and the housing allowance on work incentives is apt to be very slight because few elderly are in the labour force. Further, the imputed income of home equity is not part of countable income for the GIS, and so the total effect of the GIS and housing allowance on saving is apt to be small.

In the case of the young, the total effect of UI and the housing allowance may be great. But the *marginal* effect of the housing allowance is apt to be slight, and its very existence may make it possible to reduce the size of UI benefits so that the total tax-back for certain vulnerable groups could be less if an allowance program were in effect, than otherwise. One such group would be primary workers in areas where housing is very cheap.

A further attraction of a housing allowance program for the young is its properties relative to Family Benefits. A fully employed FBA single-parent mother with two children would find it advantageous to opt for a housing allowance rather than FBA benefits once she was quite close to the FBA break-even income. In this case she will face a lower tax-back rate – and so a lower work disincentive – than under FBA benefits.

Altogether, the work and saving effects of a housing allowance, at the least, do not count importantly against it. If proper advantage of a housing allowance program is taken in the redesign of other programs, introducing a housing allowance might actually reduce the undesirable work and saving effects of the income security system.

NOTES

- 1 Note that although Figure 11 implies a positive income elasticity, it implies a zero price elasticity.
- 2 These results are derived as follows. Let $R = R^*$. Then from (11)

$$R^* = 190 + 0.1YAH, \text{ and thus } YAH = (R^* - 190)/0.1. \quad (13)$$

Further, from (13) and (10), when $R = R^*$, $(R^* - 190)/0.1 = 187.50 + 0.775Y$ and thus

$$Y = ((R^* - 190)/0.1 - 187.5)/0.775. \quad (14)$$

For $R = R^* = 250$, from (13), $YAH = 600$, and from (14), $Y = 532$.

- 3 For a discussion of stigma as a factor in choosing among alternative social security programs, see Mendelson (1981).
- 4 However, no studies are available on the work effort effects of the US Experimental Housing Allowance Program. Apparently work effort effects were not part of the massive research agenda.
- 5 Danziger, Haveman, and Plotnick (1981) report that a large number of studies, very largely using US data, have found a zero effect. They point out that most of the studies finding a large negative effect of transfers to the elderly were performed using Feldstein's incorrectly constructed social security wealth variable. There is very little evidence on the effect of transfer programs for the non-elderly. Danziger, Haveman, and Plotnick point out that, although potential unemployment insurance beneficiaries may save less because of the existence of the program, economy-wide saving may be increased by an unemployment insurance program because of the accelerator-multiplier effects of the consumption expenditure of beneficiaries in an underemployed economy.
- 6 The New Brunswick allowance for the elderly is available only to elderly persons with total assets of less than \$15,000.
- 7 Of course, an asset condition may be desirable on equity grounds.
- 8 A housing allowance even for renters might encourage home ownership because of its effect on the income of renters. A low-income renter will stand less chance of having his savings wiped out by a spell of unemployment under a housing allowance program. These savings might be intended for a down payment on a house.
- 9 More precisely, the principles were, in effect, collapsed into the last two because other programs having the same general goals as Mincome Manitoba were taken to include all other income security programs.
- 10 These programs are the Renters' Tax Credit in British Columbia and the Property Tax Credit in Manitoba.
- 11 Hum reports (1981) that in the Mincome Manitoba experiment such housing subsidies were also ignored in the case of non-rent-geared-to-income tenants on the grounds that the subsidy could be regarded as merely the outcome of inefficient pricing. Certainly there would be an equity problem if for non-profit tenants market rent minus actual rent was added to income and for private tenants of bargain units the similar differential was not.
- 12 The housing allowance would be given by $A = 0.75(R - (0.3Y) - (0.3/0.5)(0.5YO)) = 0.75R$ for GIS recipients (i.e. for those with YO less than $2GIS_G$).
- 13 The housing allowance would be given by $A = 0.75(R - 0.3YO - 0.45GIS) = 0.75R - 0.05625YO - 0.3375GIS_G$ and $A + GIS = 0.75R + 0.6625GIS_G - 0.55625YO$.
- 14 This is derived as follows. Substituting (10) into (13), $A = 0.75(190 + 0.1YAH) - 0.225GIS_G - 0.1125YO$ and $YAH = YO + GIS_G - 0.5YO + A$; therefore $YAH = YO + GIS_G - 0.5YO + 142.50 + 0.075YAH - 0.225GIS_G - 0.1125YO = 154.05 + 0.8378GIS_G + 0.4189YO$. Subtracting YO , $A + GIS = 154.05 + 0.8378GIS_G - 0.5811YO$.
- 15 This can be easily seen by noting that if (w_1, w_2) changes from (1,0) to (0,1) the tax-back as a ratio of YE in the allowance formula changes from -0.225 to -0.135 and the total tax rate increases from 0.60 to 0.69.
- 16 This housing allowance was introduced in late 1981. Information is taken from Ontario Ministry of Community and Social Services (1981).
- 17 There is evidence that in Manitoba some people eligible for social assistance are taking SAFFR, the housing allowance, instead. This evidence is the data on frequency of assessment. Recipients with a stable income are assessed once a year; about 65 per cent of all SAFFR recipients are in this category. Recipients who indicate that they expect their income in the current year to be different from that in the previous year, or whose income is from a source such as UI or full-time

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employment for the summer only (in the case of a student), are reassessed quarterly; about 25 per cent of recipients are in this category. Recipients with no current income are reassessed monthly; about 10 per cent of recipients are in this category (information from Heidi Everett, MHRC). Presumably while some of the recipients in the last category are ineligible for social assistance because of too-large assets, many others are eligible but have chosen to receive SAFFR rather than social assistance. Indeed to some extent the monthly assessment, requiring recipients to go to the SAFFR office, is done to give an opportunity to advise them that it would be to their advantage to switch from SAFFR to social assistance.

A housing allowance for Ontario?

I INTRODUCTION

This study asks, in effect, whether an income-conditioned percentage-of-rent housing allowance would be a desirable program for Ontario. To an important extent the answer depends on the positive economics of a housing allowance, that is, on the distribution of its benefits, on its effects on household behaviour, and on its effects on markets and on other government programs. Most of this study has been concerned with predicting these effects. In this chapter the critically important findings about the effects are reviewed: household response in section II and market effects in section III. Sections IV and V assess the likelihood that the various possible goals for housing allowances will be attained. Section VI answers the question posed in the title: yes, a housing allowance would be desirable; and recommendations are made about parameters of the plan and related issues.

II THE EVIDENCE ON HOUSEHOLD RESPONSE

A remarkable finding of this study is that the household response to an ICPOR allowance is very slight, at least over a period as short as two or three years. It has been said that all good economic theory is obvious *after* it is discovered. It might also be said that economic behaviour seems inevitable after it has been observed. This certainly seems the case here. Many recipients have probably not responded to the ICPOR incentives for increased housing consumption for the very good reason that they were initially consuming a greater-than-optimal amount of housing service, either because of regulations such as housing standards by-laws or because their income was below its

permanent level. Many, also, were already paying a rent above the ICPOR threshold rent, and so the encouragement to increased housing consumption was slight – indeed no more than that offered by a standard negative income tax. Additionally, length-of-tenure discounts and housing market imperfections mean that a move to accommodation with a substantially higher rent is apt to yield only a small and uncertain increase in housing consumption. Further, transactions costs are high. Many elderly recipients are so old that the cost of moving anywhere but into institutional or family care must seem impossibly high.

It should be added that household response is apt to be greater after an allowance program has been in effect for many years. The full response of an individual household to a change in its circumstances typically takes several years (Hanushek and Quigley, 1979). More important, over a long period of time there may be indirect effects. A possible insurance effect may be identified. Some households with a fluctuating but generally low-middle income may now live in overcrowded housing largely because they are risk averse and wish to keep relatively fixed costs such as housing expenditure low to help them ride out periods of low income. If a housing allowance program were in effect they would not usually receive the allowance, but during spells of low income they would, cushioning the housing expense burden. After some experience of the assistance provided by the housing allowance during periods of adversity the household might be willing in good times to venture into more expensive accommodation, knowing the protection provided by the allowance program in bad times. In this scenario the venture into better housing would occur when the household was not an allowance recipient, and so this allowance-induced effect would not be detected.

There are institutional long-run effects that may increase the response of households as well. If the allowance is extended to owner-occupiers, mortgage lenders might become more willing to lend to low-middle-income households with a fluctuating income, because a housing allowance would help prevent defaults brought about by unemployment or other adversities. Thus a housing allowance might allow some low-middle-income households to upgrade by becoming owner-occupiers. But it is difficult to imagine that either this or any other long-run effect would be very sizeable in view of the slight or zero response observed in existing programs so far.

III THE EVIDENCE ON MARKET EFFECTS

A major objection to housing allowances has been their possible effects on the price of housing service. Some opponents of allowances have believed that a housing allowance program would substantially increase rents without a comparable increase in housing service so that the benefits of the program would go largely to landlords, not low-income tenants. Both the findings from EHAP and the experience in Canadian programs lay these fears to rest. The price response of housing allowance programs has been undetectable. The primary reason for this has been the virtually non-existent demand response: if housing service demanded does not rise, the price will not increase because of the program, regardless of the elasticity of supply. Further, a lack of a housing demand response means that the price of housing service will not rise *even if the market is very tight*.

The evidence from British Columbia suggests that a tight market would tend to short-circuit any demand response that might exist. In particular, it suggests that recipients are even less likely to move – and a move is usually necessary if housing consumption is to increase – in a tight market than in a loose one. This may be the consequence of the greater search and moving costs in a tight market.

Some critics of housing allowances have claimed that the benign results of the housing allowance program in Manitoba have been the consequence of the loose housing market in Winnipeg and the outcome of a housing allowance in the Toronto market would not be so happy. The argument here essentially turns this point on its head. The very fact that in Manitoba the loose market made better accommodation easy to find, and no apparent increase in the moving rate or in housing consumption was observed, suggests that the demand-side effects of a housing allowance would be even less in a tight market such as Toronto. And without such a demand-side effect there cannot ordinarily be a market price effect.¹

There is one possible market-price effect of housing allowances that favours an allowance program. Low-income families may become less costly tenants for landlords if the program is in effect. Major costs for landlords, associated with delivering housing service to low-income families, are high turnover associated with fluctuating incomes and the relatively high probability of non-payment of rent. A housing allowance program will tend to reduce these costs.

IV GOALS THAT AN ICPOR ALLOWANCE IS UNLIKELY TO ACHIEVE

It is now possible to make some quite firm judgments about the possibility of achieving various goals through an ICPOR allowance. Here we consider those that are unlikely to be achieved. The first of these is the goal of improving the housing conditions – especially physical quality – of low-income households. This would entail the rehabilitation of badly maintained housing, a long-standing goal of housing agencies such as CMHC. This goal is unlikely to be achieved because its *sine qua non* is a substantial housing demand response from allowance recipients and this has not occurred. Even if in the long run there were a substantial housing response, it would be only partly in the direction of increased physical quality because low-income households appear to spend any increase in their income as much to reduce crowding as to increase housing quality (see chapter 2).

A second goal that a housing allowance is unlikely to achieve is increased income integration. This goal achieved so much prominence in the late 1970s, in Canada and the United States (Streich, Clarke, and Harding, 1979), that it might be termed *the* social housing goal of that period. The evidence from the US EHAP and from Manitoba (see chapter 7) suggests that a housing allowance does not affect the degree of income integration of private market tenants. If this goal is worthwhile – and there is some reason to believe it is not – non-profit housing is a much better instrument for its achievement. A housing allowance clearly does better than public housing with respect to this goal. An allowance recipient has some chance of living with a high-income neighbour while a public housing tenant has none.

A goal at a different level is that of reducing the pressure for the continuation and tightening of rent control. It is clear that a housing allowance would substantially reduce the burden of large rent increases on low-income households, especially if R^* , threshold rent, were indexed. The equity case for rent control would be weakened as a consequence, and the economic argument for abandoning rent control (see Arnott, 1981) would be even more convincing. But a housing allowance would not lessen the impact of rent increases on middle-income renters, and they are probably the main source of pressure for the continuation of rent control. By January 1982, a housing allowance program had been in place in Manitoba for two years, and yet

rent control was reimposed in that month after the victory of a political party (the NDP) that had rent control as one of its major campaign planks. This is a warning to those who are sanguine about the likelihood of housing allowances sweeping away rent control.

V GOALS THAT AN ICPOR ALLOWANCE IS LIKELY TO ACHIEVE

An ICPOR housing allowance is likely to achieve the goal of increasing the progressivity of the distribution of income. With respect to income, it is highly progressive. In the case of a renter ICPOR plan with a contribution rate varying by household size (a VCR plan), estimates for Ontario show the allowance averaging 26.3 per cent of income for all households below half the poverty line, 3.6 per cent for those from this income level to the poverty line, and less than 0.1 per cent for households from the poverty line to twice the poverty line (Table 26). Further, 91 per cent of all renter households with income less than the poverty line are eligible recipients, so that the benefits are broadly distributed among the very poor. These estimates suggest that a housing allowance would be much more progressive with respect to income than public housing (see public housing estimates in Fallis, 1980). One major caveat must be mentioned. These estimates assume a 100 per cent participation rate among rent- and income-qualified eligibles, while the evidence for British Columbia (chapter 4) suggests that the participation rate is only about 60 per cent and there is some decline in the participation rate as income falls.

Income is only a rough indicator of need. There is a presumption that an ICPOR allowance is even more progressive with respect to true need than it is with respect to income because it allows for variation (among households of the same income level) in the size of the relatively fixed expenditure, rent. It adjusts for variability in the price of housing service and allows for the effect of high transactions costs in trapping low-income households in high housing expenditure. The presumption that an ICPOR allowance is highly progressive with respect to need is not overturned by evidence on its distribution with respect to housing characteristics, estimated for Ontario in chapter 6. Among low-income households the mean payment declines monotonically as space increases, for the VCR plan, and for households with merely adequate physical facilities the mean payment is greater than it is for those with good facilities.

VI POLICY RECOMMENDATIONS

It is now possible to answer the question posed by the title of this chapter. The answer depends on predictions based on imperfect information and reflects to some extent the values of this writer. Other predictions would be plausible and other advice would be defensible. That said, the answer is yes, Ontario should adopt a housing allowance program. There are strong grounds for believing that it is a more equitable way of redistributing income than a standard negative income tax, and although prediction of the allowance's effects is subject to error, the weight of evidence is that the efficiency costs of an allowance would be slight. Answering yes raises questions about the parameters of the plan. These are discussed below.

Parameters of an ICPOR allowance

Eligible households

There is a very strong case for making families eligible as well as elderly households. Chapter 2 shows that low-income families need assistance much more than do the low-income elderly.

The case is not strong for extending the housing allowance to young people other than family heads. There is little reason to suppose that high transactions costs trap them into being overhoused; they probably value security of tenure very little; they are probably not as costly to serve as families, and so they probably need not pay an especially high price for housing service; and the work disincentive of the tax-back in the ICPOR is relatively important for them.

There is a good case for extending the allowance to the late-middle-aged - those 50 to 65 - and to the handicapped because of the characteristics they share with the elderly.

The case is strong for extending the allowance to owner-occupiers as well as renters, especially to family owner-occupiers. Low-income owner-occupiers have received little attention in this study because very few data on them were available at the time this study was done, but chapter 2 indicates that they suffer from an affordability problem just as do renters. Further, this problem is not the consequence of a high level of housing consumption, especially among family owner-occupiers (see chapter 2). Many of them are severely crowded.

Owner-occupiers present knotty problems because of the question of defining their housing expense and income. The outcome of Appendix E suggests that eligible housing expenses include utilities, property

taxes, a fraction of maintenance expense – perhaps one half of actual expense – and mortgage interest at the actual rate minus a fraction, again perhaps half, of the rate of inflation. The disallowance of part of maintenance and interest expense is to account in a rough way for that part of housing expense that is saving rather than expenditure for housing consumption. It would be ideal to add the imputed return to ownership to income, but this is very likely to be politically unacceptable. If the imputed return to ownership were added to income, for consistency the opportunity cost of the use of equity would have to be added to expenses. Thus the omission of the imputed return to ownership does not have as much effect as appears at first sight.

An attractive alternative to extending the allowance to all owner-occupiers among low-income families and elderly households would be to extend it only to family owner-occupiers, excluding elderly owner-occupiers. There are two reasons for this. First, the vast majority of low-income elderly owner-occupiers have no mortgage, so that the inequity of excluding from income the imputed return to ownership is particularly relevant in their case. Second, the elderly are eligible for the Guaranteed Income Supplement which also ignores this imputed return, so that the inequity clearly demonstrated in Table 10 would be exacerbated.

The contribution rate

It was argued in chapter 3 that varying the contribution rate by household size is highly desirable on equity grounds because the larger the household the more it needs for non-housing expenditure and therefore the lower the proportion of its income it can afford for housing. An attractive set of contribution rates would be 37.5 per cent for single-person households, 30 per cent for two-person households, 25 per cent for three, 22.5 per cent for four, and 20 per cent for five or more. The rate given here for single-person households is somewhat lower than that indicated as appropriate by the analysis of chapter 2 and used in the VCR estimated in chapter 6, and the differential between it and the rate for couples is somewhat too small. It is a compromise between the ideal and what has commonly been taken as acceptable. Generally, Canadian discussion has never considered contribution rates higher than 30 per cent for renters, though, as chapter 2 points out, contribution rates of 35 per cent have figured in US discussion. Of course, if funds were available for a considerably more generous housing allowance than the one simulated in chapter 6, then

all contribution rates could be lower. The important point is that substantially larger contribution rates should be used for smaller households than for larger ones.

Varying the contribution rate by household size has the advantage of greatly reducing the incentives for household splitting among eligibles, as chapter 3 has pointed out, though this is of little practical importance in view of the evidence adduced in chapter 4 that little splitting is likely to occur even under programs under which incentives to split are strong. Varying the contribution rate has another more important efficiency advantage. It reduces the negative income tax rate for the typical family recipient, who is sensitive to work incentives, while raising it for the typical elderly recipient, who is not.

The estimates of chapter 6 show that a VCR with these contribution rates would cost very little more than the benchmark VCR. Its major effect would be to shift much of the benefit from elderly households to families, especially two-parent families, and accordingly to direct more assistance to crowded households.

Varying the contribution rate according to income is also attractive and would on the face of it be consistent with the progressive positive tax system. Its effect is apt to be much less important than variation according to family size, however, and it would add substantially to the complexity of the plan. Still, it should be considered.

Threshold rents

Setting the threshold rents involves three separate issues – the overall level of threshold rents, the extent of their variation with household size, and the extent of variation with geographical area. On the first point, it is recommended that they be set somewhat above 33rd percentile rents but below median rents, say at the 42nd percentile. Setting them at this level would increase costs in the order of 20 per cent as compared with 33rd percentile rents, the estimates of chapter 6 suggest. While 33rd percentile rents are attractive on the grounds that middle-income households should not be expected to subsidize the accommodation of low-income tenants up into the middle or upper rent range, setting threshold rents relatively low will also penalize low-income households that are paying relatively high rents for reasons largely beyond their control. Setting threshold rents at more than the 33rd percentile but less than the median, for urban areas of 100,000 people or more in Ontario, seems a reasonable compromise.

As this last statement implies, it is also recommended that threshold rents not be varied by geographical area, thus following the practice established by existing provincial plans. This reduces the incentive for moving, relative to a plan with threshold rent varying by area, and it is equitable to the extent that those in high-rent areas get benefits from living there. But it reduces the extent to which the allowance meets need, particularly in Toronto. The recommendation of geographical invariability is thus not a very strong one. There is a quite good case for some geographic variability and, in particular, for a higher threshold rent in Toronto than elsewhere.

It is recommended that threshold rents vary more by household size than those in existing programs. This would clearly be the case if the rent for an elderly single person were taken as the rent of a bachelor apartment. Is such an apartment suitable for a single elderly person? Very few low-income elderly actually live in such accommodation in the private market. The cost estimates have assumed that such accommodation is suitable, but there is a good case for setting the rent for the single elderly somewhat higher than this. This would imply increasing the incentive for household splitting, however, as chapter 3 points out.

The percentage of gap

It is recommended that Ontario initially adopt a percentage of gap of more than the 75 per cent used in British Columbia and Quebec but less than the 90 per cent used for some recipients in Manitoba; 80 per cent might be used initially, with an increase to 90 per cent after some experience with the program. The Manitoba experience (see chapter 2) indicates that paying some recipients 90 per cent of the difference between the rent they pay (up to the threshold rent) and their affordable rent does not noticeably increase housing consumption or induce fraudulent collaboration with landlords. An important implication of a higher percentage-of-gap parameter is that it reduces the net rent-to-income ratio of recipients. For example, consider a mother with one child, with a rent-to-income ratio of 40 per cent before receiving an allowance based on a 30 per cent contribution rate. If the percentage of gap is 75 per cent, her rent-to-income ratio after receiving the allowance is 32.5 per cent, while it is only 31 per cent if the percentage of gap is 90 per cent.² For an elderly single person with an initial rent-to-income ratio of 50 per cent and a contribution rate of

37.5 per cent, the analogous ratios of net rent to income are 40.6 per cent and 38.75 per cent, respectively.

As chapter 6 shows, an ICPOR housing allowance, as recommended in this chapter, with relatively low threshold rents and high contribution rates but paying a relatively high percentage of affordability gaps, dominates other plans of equivalent cost on equity grounds. This is so because the low threshold rents together with the high contribution rates result in a low threshold income, which means that the allowance is received only by relatively low-income households (and declines relatively quickly as income rises), while the payment of a high percentage of gap means that those who do receive the allowance receive a relatively large one.

Other recommendations

Strategies to increase participation

A major failing of existing housing allowances is their failure to reach a large proportion of eligibles. For this reason it is recommended that a substantial amount of attention be paid to strategies to increase participation. One possibility is repeated simple messages with Old Age Security, Family Allowance, and Unemployment Insurance cheques. Another is store-front application centres, because difficulties with the application are responsible for much of the non-participation, as chapter 4 shows.

The Property Tax Grant and Property Tax Credit

The cost of the housing allowance recommended here, even with owner-occupiers included, would be far less than the Property Tax Credit and the Property Tax Grant, and these are both much less progressive than the housing allowance. It is recommended that they be abolished. If they are retained, it is recommended that the allowance payments be deducted from them. This would reduce the cost of a housing allowance for the elderly very greatly below that estimated in chapter 6.

Other housing programs

The private rent supplement program has some similarities to a housing allowance (see chapter 7) because it involves private market units, but its payments are made directly to landlords, it allows recipients

little choice, and it is far more expensive per recipient than a housing allowance. As chapter 7 finds, most of its already weak rationale disappears with the implementation of a housing allowance. It is therefore recommended that it be abolished.

Rent-geared-to-income tenants in social housing would be unfairly favoured over housing allowance recipients if their contribution rates are lower than the contribution rates in the allowance plan. It is therefore strongly recommended that the rates of the two groups be the same. The rates (see chapter 7) of RGI tenants are well below the allowance rates suggested earlier in this chapter. Indeed, raising RGI rates would provide substantial funds to finance a housing allowance program. An attractive option would be to raise the rents of RGI tenants somewhat, and use the housing funds thus released to lower the suggested contribution rates for the housing allowance, thus enriching the housing allowance program beyond the modest level indicated earlier in this chapter.

NOTES

- 1 Unless there is a shift in the supply curve, such as that discussed below.
- 2 (This applies only to recipients paying less than the threshold rent.) The result is easily seen by noting that where the contribution rate is 30 per cent and the percentage of gap is 75 per cent the allowance is $0.75(R - 0.30Y)$. Thus the rent-to-income ratio, after deducting the allowance from rent, is

$$\frac{R - 0.75(R - 0.30Y)}{Y} = 0.25 \frac{R}{Y} + 0.225,$$

and where $R/Y = 0.40$, this expression takes the value 0.325.

Appendix A

Evidence on the variability of the price of housing service

The major evidence for the hypothesis that the price of housing service varies greatly is that provided by hedonic rent studies. For instance, Staranczak (1978), in a regression for Ontario middle- and low-quality units in 1971, used 30 regressors; none the less his regression explained only 53 per cent of the variance in rent. In other words, stochastic variation was nearly as important as variation in the quantity of housing service in explaining the variation in rent. It might be argued that most of the stochastic variation in Staranczak's regression was the consequence of the limitation on explanatory variables required by his data source. But Kain and Quigley (1975) did a regression with units from an unconstrained quality range in St Louis, using a much richer data source that permitted the use of variables such as floor area, lot area, interior unit quality, exterior unit quality, and many neighbourhood characteristics, and they were left with 29 per cent of the variance in rent unexplained. Further, much of the explained variation in these regressions would be defined in this study as variation in the price of housing. For instance, a substantial amount of explanation in the Kain and Quigley regression is provided by 'years of occupancy' of the tenant (their length-of-tenure discount variable), and a substantial amount of explanation in Staranczak's regression is provided by location, which, following Polinsky (1977) and others, is not taken as part of the housing bundle in this study.

Hedonic rent studies performed as part of the US EHAP analysis also found a substantial amount of the variation in rent unexplained. Great pains were taken to include all possible explanatory variables because it was important, given the ultimate purpose of the regressions, to do so. Despite this, investigators found that so much

variation in rent was the consequence of pure price variation that the estimated increase in housing service obtained by EHAP movers was far less than the increase in their rent, taken at face value, would indicate. This finding has attracted a lot of interest to the issue of housing bargains (see Weinberg, Friedman, and Mayo [1981], and Kennedy and Merrill [1979], cited in Kain [1981]).

Some data corroborating the findings of the hedonic studies come from Ontario. In 1979, under rent review, a guideline increase of 6 per cent was allowed (Arnott, 1981), but 19.1 per cent of Toronto non-movers had no rent increase whatever (Ontario Ministry of Housing, 1981, Table 1.3, p. 21), despite a rental vacancy rate of just 1.2 per cent in the Toronto CMA (*Canadian Housing Statistics*, 1980). The data for 1978 are very similar.

There are also two major pieces of evidence in this monograph that are consistent with the hypothesis of substantial price variation. First, the estimated incidence of housing problems among low-income renters paying less than 30 per cent of their income for rent is not greatly higher than the incidence for all low-income renters (see chapter 2); and rental dwellings without severe physical defects and dwellings with rent below the 33rd percentile are far from being disjoint sets (see chapter 6; Appendix H).

Appendix B

The data for chapter 2

The data used in chapter 2 are largely from the Household Income, Facilities and Equipment (HIFE) Micro Data File, 1976, created at Statistics Canada from its Survey of Consumer Finances, 1976, its Survey of Household Facilities and Equipment, 1976, and its Rent Survey. These surveys were conducted as part of the Labour Force Survey, the first in April 1976, and the second two in May 1976 (Statistics Canada, 1977 or 1978). The number of households common to both was 28,000. From this the data file of 21,130 households was created; of these, 5,272 are for Ontario.

The second major data source is the Survey of Housing Units (SHU), 1974 Micro Data File. This survey was conducted in 1974 by Statistics Canada under contract to Canada Mortgage and Housing Corporation. The data file contains records for 47,021 households; of these, 19,566 are in Ontario.

For this study the major advantage of the HIFE file is its coverage of rural and small urban areas. The SHU survey covers only the urbanized core of CMAs. Another advantage of the HIFE file is its inclusion of data on central heating and the age of the spouse of the household head. However, only the SHU file has data on the state of repair of dwellings, on mobility, and on owner-occupiers' expenses. A major problem for this study is the relatively small size of the HIFE file. Subsamples of interest for Ontario are often too small to yield acceptably precise estimates of population values. This is especially true of subsamples for rural areas. Partly because of this, estimates for Canada are included in Appendix C.

As noted above, some HIFE Ontario subsamples of interest are relatively very small. None the less, estimates from these subsamples are shown on some of the tables. To warn the reader of the lack of

precision of these estimates, round brackets are used whenever estimates are based on fewer than 50 observations, and square brackets for fewer than 25 observations. Estimated standard errors of proportions in HIFE are larger than in the case of a simple random sample because the Labour Force Survey uses stratified clustered sampling. Specifically, for a sample size of 50, the estimated standard error is 0.122 when the proportion having a characteristic is 0.25, 0.101 when the proportion is 0.15, 0.080 when the proportion is 0.10, and 0.062 when the proportion is 0.05. These are calculated using the formula $2\sqrt{PQ/n}$ where P is the proportion of the population with the characteristic $Q = (1 - P)$ and n is sample size. Thus it can be seen that the estimated standard error here is twice that for a simple random sample (Statistics Canada, 1977, p. 117).

Both the HIFE and SHU income data relate to the calendar year before the survey. For this reason incomes have been inflated. Each 1973 SHU income has been increased by 13.9 per cent to give estimated 1974 income; this is the adjustment CMHC has made in its use of SHU. Each 1975 HIFE income has been increased by 13.83 per cent - the amount by which average hourly earnings in manufacturing increased between 1975 and 1976 - to give 1976 estimated income.



Appendix C
Supplementary tables for chapter 2

TABLE C1
Incidence of housing indicators among all households by income by area, for Ontario (percentage)

Indicators	Urban centres with a population of 100,000 or more						Other urban areas						Rural areas					
	Income classes						Income classes						Income classes					
	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P
<i>Basic facilities and structure</i>																		
No running water	0.2	0.0	0.1	0.8	0.3	0.3	0.8	0.3	0.3	13.7	2.7	0.8	13.7	2.7	0.8			
No full bath exclusive use ^c	2.1	1.0	0.4	6.9	1.8	0.8	6.9	1.8	0.8	23.2	12.2	2.5	23.2	12.2	2.5			
No central heating ^d	1.8	1.6	0.8	19.3	6.3	3.2	19.3	6.3	3.2	27.4	14.1	5.0	27.4	14.1	5.0			
Poor maintenance ^e	8.0 ^b	5.7 ^b	4.3 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
Built before 1940	31.5	26.0	19.2	53.7	38.6	30.6	53.7	38.6	30.6	50.3	42.5	23.6	50.3	42.5	23.6			
<i>Space</i>																		
> 1 person per room	3.9	4.4	1.1	2.6	3.0	1.9	2.6	3.0	1.9	10.5	3.4	1.7	10.5	3.4	1.7			
Crowded bedrooms ^f	5.8	5.3	1.5	4.7	2.3	1.1	4.7	2.3	1.1	6.8	2.1	1.1	6.8	2.1	1.1			
Very crowded bedrooms ^f	2.5	1.3	0.4	0.9	0.7	0.7	0.9	0.7	0.7	4.4	0.0	0.3	4.4	0.0	0.3			
<i>Affordability</i>																		
Housing expense > 30 per cent of Y	81.3 ^b	22.7 ^b	4.2 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
Housing expense > variable percentage of Y ^g	81.7 ^b	32.4 ^b	7.1 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
<i>Security of tenure</i>																		
Occupied < 1 year	19.6 ^b	18.6 ^b	15.8 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
≥ 4 moves in 34 years	4.5 ^b	2.6 ^b	2.0 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
'Other' reason for last move	7.5 ^b	4.3 ^b	3.8 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			

a Y refers to household income and P to the Statistics Canada low-income cut-off (see Table 5 note a for details).

b Estimate is for urbanized core of CMAs.

c Exclusive use of bath or shower and of toilet.

d Principal heating equipment: furnace or electricity.

e At least one major defect or at least three minor defects.

f For definition see Table 1.

g Ratio of housing expense to income: 40 per cent for 1-person households, 30 per cent for 2-person households, 25 per cent for 3, 22.5 per cent for 4, 20 per cent for 5+.

SOURCES: Weighted estimates for unsubsidized households computed using Statistics Canada 1976 HIFE Micro Data File (1975 Incomes) except for the 'poor maintenance' indicator, the affordability indicators, and the security of tenure indicators, which use SHU, 1974.

TABLE C2
Incidence of housing indicators among all households by income by area, for Canada (percentage)

Indicators	Urban centres with a population of 100,000 or more						Other urban areas						Rural areas					
	Income class ^a						Income class ^a						Income class ^a					
	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	P < Y < 2P	Y > 2P
<i>Basic facilities and structure</i>																		
No running water	0.1	0.0	0.0	1.7	0.4	0.3				13.0	4.5	1.3						
No full bath exclusive use ^c	3.2	1.2	0.5	9.4	2.9	1.6				32.8	16.3	4.0						
No central heating ^d	10.8	6.1	2.6	16.2	8.0	4.1				35.3	20.4	7.5						
Poor maintenance ^e	14.9 ^b	10.0 ^b	6.0 ^b	n/a	n/a	n/a				n/a	n/a	n/a						
Built before 1940	34.0	23.2	16.3	44.0	31.7	24.3				45.0	35.5	24.1						
<i>Space</i>																		
> 1 person per room	5.3	4.5	1.5	5.9	5.3	2.7				11.7	7.8	3.7						
Crowded bedrooms/	6.0	4.8	1.6	6.6	4.4	1.8				9.7	5.8	2.7						
Very crowded bedrooms/	2.4	1.5	0.5	2.7	1.5	0.6				5.6	2.3	1.3						
<i>Affordability</i>																		
Housing expense > 30 per cent of Y	74.7 ^b	17.7 ^b	3.0 ^b	n/a	n/a	n/a				n/a	n/a	n/a						
Housing expense > variable percentage of Y ^g	73.3 ^b	25.9 ^b	5.1 ^b	n/a	n/a	n/a				n/a	n/a	n/a						
<i>Security of tenure</i>																		
Occupied < 1 year	19.8 ^b	18.1 ^b	17.3 ^b	n/a	n/a	n/a				n/a	n/a	n/a						
≥ 4 moves in 34 years	3.3 ^b	2.8 ^b	2.3 ^b	n/a	n/a	n/a				n/a	n/a	n/a						
'Other' reason for last move	5.9 ^b	4.2 ^b	3.6 ^b	n/a	n/a	n/a				n/a	n/a	n/a						

NOTE: Sources and notes a to g as for Table C1.

TABLE C3
Incidence of housing indicators among elderly renting households by income by area, for Canada (percentage)

Indicator ^a	Urban centres with a population of 100,000 or more				Other urban areas				Rural areas			
	Income class ^a				Income class ^a				Income class ^a			
	Y < P	P < Y < 2P	Y > 2P	Y < P	Y < P	P < Y < 2P	Y > 2P	Y < P	Y < P	P < Y < 2P	Y > 2P	Y > 2P
<i>Basic facilities and structure</i>												
No running water	0.0	0.0	0.0	0.6	0.0	0.0	(0.0)	[25.2]	(11.0)	—	—	—
No full bath exclusive use ^c	5.2	3.2	0.0	11.5	3.0	(0.0)	(0.0)	[39.6]	(18.0)	—	—	—
No central heating ^d	12.4	11.1	6.3	14.8	10.2	(0.0)	(0.0)	[47.1]	(9.2)	—	—	—
Poor maintenance ^e	15.7 ^b	12.0 ^b	4.3 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Built before 1940	22.9	30.1	13.5	37.4	44.0	(20.2)	(20.2)	[32.1]	(52.1)	n/a	n/a	n/a
<i>Space</i>												
> 1 person per room	0.0	0.0	1.0	1.2	3.0	(0.0)	(0.0)	[4.7]	(0.0)	—	—	—
Crowded bedrooms ^f	0.2	0.7	1.0	1.2	3.8	(0.0)	(0.0)	[0.0]	(0.0)	—	—	—
Very crowded bedrooms ^f	0.2	0.0	0.0	1.2	3.4	(0.0)	(0.0)	[0.0]	(0.0)	—	—	—
<i>Affordability</i>												
Housing expense > 30 per cent of Y	67.1	39.5	5.0	68.2	27.6	(12.7)	(12.7)	[73.8]	(31.7)	—	—	—
Housing expense > variable percentage of Y ^g	51.5	20.0	0.0	51.9	15.6	(0.0)	(0.0)	[53.4]	(27.6)	—	—	—
<i>Security of tenure</i>												
Occupied < 1 year	11.2 ^b	9.8 ^b	15.2 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
≥ 4 moves in 3½ years	0.2 ^b	0.0 ^b	0.1 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other reason for last move	5.0 ^b	7.0 ^b	3.9 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

NOTE: Sources and notes a to g as for Table C1. Parentheses indicate estimate based on 25-49 observations. Square brackets indicate 10-24 observations.

TABLE C4
Incidence of housing indicators among renting family households by income by area, for Canada (percentage)

Indicator ^a	Urban centres with a population of 100,000 or more					Other urban areas					Rural areas				
	Income class ^a					Income class ^a					Income class ^a				
	Y < P	P < Y < 2P	Y > 2P	Y < P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	Y > 2P	Y < P	P < Y < 2P	Y > 2P	Y < P	Y > 2P
<i>Basic facilities and structure</i>															
No running water	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.0	11.2	4.0	11.2	4.0	2.4	4.0	2.4
No full bath exclusive use ^c	0.7	0.8	0.3	5.2	2.2	5.2	2.2	0.8	22.5	13.3	22.5	13.3	7.4	13.3	7.4
No central heating ^d	18.9	13.2	10.0	11.8	15.2	11.8	15.2	8.5	27.9	22.6	27.9	22.6	8.0	22.6	8.0
Poor maintenance ^e	23.5 ^b	17.7 ^b	9.0 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Built before 1940	31.5	22.0	21.6	39.4	34.7	39.4	34.7	24.4	48.8	38.1	48.8	38.1	36.0	38.1	36.0
<i>Space</i>															
> 1 person per room	15.1	11.2	6.1	17.3	9.2	17.3	9.2	5.8	27.3	11.4	27.3	11.4	8.1	11.4	8.1
Crowded bedrooms ^f	16.3	14.2	6.8	24.5	9.3	24.5	9.3	6.0	23.8	12.2	23.8	12.2	11.2	12.2	11.2
Very crowded bedrooms ^f	6.4	3.8	0.0	8.0	3.0	8.0	3.0	2.6	15.5	4.5	15.5	4.5	0.6	4.5	0.6
<i>Affordability</i>															
Housing expense > 30 per cent of Y	59.2	7.7	1.0	59.9	5.7	59.9	5.7	0.0	48.4	6.1	48.4	6.1	0.0	6.1	0.0
Housing expense > variable percentage of Y ^g	74.3	21.4	4.5	72.4	21.8	72.4	21.8	1.5	63.5	17.5	63.5	17.5	2.0	17.5	2.0
<i>Security of tenure</i>															
Occupied < 1 year	30.8 ^b	26.9 ^b	24.5 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
≥ 4 moves in 3½ years	6.5 ^b	4.1 ^b	4.4 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
'Other' reason for last move	10.4 ^b	6.5 ^b	6.0 ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

NOTE: Sources and notes a to g as for Table C1.

Appendix D

A description of some ICPOR plans in New Brunswick, Manitoba, Ontario, and the United Kingdom

Three provinces have implemented programs very much like British Columbia's SAFER. New Brunswick's RATE, implemented in late 1978, is like SAFER except that the contribution rate rises quite substantially with income and the percentage of gap falls with income. Thus, for example, at an income of \$250 per month, 76 per cent of a rent increase from \$150 to \$175 is subsidized, but at an income of \$400 per month only 56 per cent of this increase is. At a rent of \$175 a month the RATE payment falls by about 34 per cent of any income increase rather than the 22.5 per cent implied by the BC SAFER's 75-30 formula.¹ Like the EHAP design centre housing allowance, RATE has a minimum-standards requirement: the unit must comply with the National Building Code standards.² This, and an asset constraint (less than \$15,000) (Barnett, 1983), are not found in other Canadian plans.

Manitoba has a housing allowance program for the elderly and for families, the first starting in January 1980 and the second in January 1981. Like RATE and unlike the BC SAFER and the various EHAP plans, Manitoba's plan has parameters varying by income level. The percentage of gap ranges from 90 per cent at low incomes to 60 per cent at high incomes, and for the elderly the contribution rate varies from 25 per cent to 27.5 per cent. More precisely, the formula for elderly couples where $R^* \leq R$ and where $\$8,500 \leq Y \leq \$11,000$ is

$$A = \left(0.9 - \frac{0.3(Y-8,500)}{2,500}\right) \left(R - \left[0.25 + \frac{0.025(Y-8,500)}{2,500}\right] Y\right), \quad (D1)$$

with R^* replacing R when $R > R^*$.³ It can be seen that the tax-back rate – the percentage of gap times the contribution rate, i.e. f in (4.3a) – is 22.5 per cent for the poorest households and 16.5 per cent for those in the higher income group, in contrast to the 22.5 per cent for all recipients in British Columbia's SAFER and 25 per cent for all recipients in the design-centre EHAP plan. Thus Manitoba recipients in the upper income range who receive income from assets have less incentive than those in British Columbia and more especially than those in New Brunswick to select their portfolios in ways that reduce its cash flow. It is important to note that in Manitoba the reduction in tax-back as income increases exists despite the increase in contribution rate as income increases because the percentage of gap is reduced.

Manitoba's housing allowance for families (defined as one or more parents living with one or more children aged less than 18), SAFFR, has slightly lower contribution rates than its allowance for the elderly. For low incomes it is 0.235, and for high incomes it is 0.2584. The Manitoba plan is unique among plans examined here in having a contribution rate varying by household type.⁴

The most recent housing allowance plan is Quebec's, implemented in August 1980. It uses the BC percentage-of-gap and contribution-rate parameters, but unlike any other province's plan it extends benefits to owner-occupiers as well as renters. For owner-occupiers, R (housing expense) is defined as property tax plus \$70 per month. The \$70 is accounted for by \$25 for heat, \$30 for repairs, and \$15 for electricity. Mortgage interest was originally not included (Québec, Société d'habitation du Québec, 1982). The property tax credit is deducted from the housing allowance. (In British Columbia and Manitoba, deduction is performed the other way round: the housing allowance is deducted from the property tax subsidy.)

Ontario has no housing allowance program *per se* targeted at low-income households. But it has both a percentage-of-rent grant program and an ICPOR grant program. Eligible for the first are the elderly, and its formula is:

$$A = 0.2R \text{ if } R \leq R^* \text{ and } A = 0.2R^* \text{ if } R > R^*, \quad (D2)$$

where R^* is \$208.33. This is called a property tax grant. The same program pays elderly home owners an annual amount equal to the property tax or \$500, whichever is less. While housing allowances are paid monthly, the Ontario grant for the elderly is paid only semi-annually.⁵ The maximum payment in this plan is less than half the maximum under the housing allowance plans in British Columbia, Manitoba, and New Brunswick.

The Ontario ICPOR, called a property tax credit, pays to most tenants aged 16-64 whose monthly rent exceeds \$75 an amount given by:

$$A = 15 + 0.02R \text{ if } (Y - E) \leq 151.67,$$

$$A = 15 + 0.02R - 0.02(Y - E) \text{ if } (Y - E) \geq 151.67, \quad (D3)$$

where Y is gross monthly income and E is exemptions (i.e. $Y - E$ is taxable income).⁶ It can be seen that in this plan the average contribution rate rises as (gross) income rises, just as in the Manitoba housing allowance. This scheme, unlike all explicitly designated housing allowances in Canada, has no maximum payment and no maximum rent, so that at no rent level does it become a pure income-conditioned cash grant.⁷ Thus a single person paying \$600 per month rent and with a gross income of \$30,000 per annum but with rental losses generated by capital cost allowances and deductions from total income acting to reduce his annual taxable income to below \$1,820 would receive \$27 per month from this Ontario scheme. The relative regressiveness of this program is illustrated by the fact that a couple with two young children in Ontario with a gross income of \$7,000 but paying \$450 per month rent would receive an allowance of less than \$27, just one-fifth the Manitoba maximum housing allowance.⁸

The British housing allowance formula is quite similar in form to the Ontario property tax credit, but it is much more generous to low-income households: $A = 0.25E + 0.6R - 0.25Y$ if $Y < E$, $A \leq R$; $A = 0.6R$ if $Y = E$; and $A = 0.17E + 0.6R - 0.17Y$ if $Y > E$, where E is 'basic expenditure needs' of the household (Cullingworth, 1977). There is a ceiling on this allowance that varies between London and the rest of the country. The tax-back rates for low and high incomes are very similar to those in the Manitoba scheme, and the percentage of rent paid by the British scheme varies with income as it does in Manitoba. In particular, in the British scheme 100 per cent of rent is paid until

rent reaches $0.25(E - Y)$ for recipients with Y less than E , while in Manitoba 90 per cent of rent is paid for recipients with no income, so long as rent is less than \$133 per month. In both the Ontario and the British schemes the payment varies by family size and composition through variation in E .

One of Olson's proposed alternatives to EHAP plans (Olsen, 1981) is also an ICPOR. Using the parameter values he gives as an example, it is: $A = 41.66 + 0.8R - (0.05 + 0.00096R)Y$ if $R \leq \$200$, and $A = 201.66 - 0.242Y$ if $R > \$200$. Thus when income is \$500 per month the marginal price subsidy is just 32 per cent.

NOTES

- 1 These ratios are calculated from the numerical payment schedule which is part of regulation 78-83 under the New Brunswick Housing Act (OC 78-573), 1978. As of September 1982 the variation in parameters was given as follows (source: Barnett, 1983):

Monthly income (dollars)	Contribution rate (percentage)	Percentage of gap
300-542	25	75
542-583	26	70
583-625	27	65
625-667	28	60
667-708	29	55
708 +	30	50

- 2 The RATE brochure omits mention of the National Building Code and instead gives the requirement that the dwelling be a 'self-contained apartment with private kitchen and bathroom which conforms to provincial health and fire safety regulations.'
- 3 For an income below \$8,500, the percentage of gap is 90 and the contribution rate is 25 per cent; for an income above \$11,000, 60 per cent and 25 per cent, respectively. For singles the income thresholds are \$5,000 and \$10,000, respectively. This information is taken from Manitoba Housing and Renewal Corporation computer software documentation. It applies in 1981. In 1980 the percentage-of-gap range was 90 to 50 and the contribution rate range was 27.5 to 30. Manitoba (as of 1981) and British Columbia also have a maximum allowance payment; New Brunswick does not. The Manitoba maximum for the elderly is \$120 per month.
- 4 The lower contribution rate for families is not explicit. The same explicit contribution rates are used as for the elderly, but 6 per cent is deducted from income in the case of families to get 'net family income,' the Y in equation D1 (Manitoba Regulation 80; Being a Regulation under the Housing and Renewal Corporation Act respecting

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the making of grants and advances by the Manitoba Housing and Renewal Corporation to provide shelter allowances for family renters; CRISP/SAFFR application form).

- 5 The first payments under this program were made in 1981, for the 1980 rent year. Information about the program is taken from Ontario Ministry of Revenue, *Ontario Tax Grants for Seniors Information Guide* (Toronto 1980).
- 6 This formula is for the 1981 property tax credit. Note also that the program pays home owners an amount given by equation D2, with R replaced by five times the property tax. For example, for a home owner with $(Y - E) < 156.17$ and property tax greater than \$180 per annum, $A = 15 + 0.1(P/12)$, where P is the amount of property tax paid.
- 7 Other provisions of the Ontario Property Tax Credit are as follows: ineligible persons are those with spouse 65 years or older (who are eligible for the elderly property tax grant), persons under 21 living at home and claimed as dependants, residents of an institution exempt from property tax, and subsidized residents of a nursing home. Most persons living in residences of post-secondary educational institutions, however, would receive a grant based on the formula, except with \$2.08 replacing $(15 + 0.1R)$ for the part of the year the residence is occupied. An important provision is that only the taxable income of the higher-taxable-income spouse is included in the formula. In the three provincial housing allowance programs total income is used to compute the allowance. (Information is taken from Revenue Canada, *Your 1980 General Tax Guide and Return - for Residents of Ontario* (Ottawa 1980)).
- 8 In addition to their housing allowance programs, both British Columbia and Manitoba have programs like the Ontario property tax credit and property tax grant program. For a discussion of the Manitoba programs see Hum and Stevens (1980).

Appendix E

Defining income and expense for owner-occupiers

If a housing allowance program includes owner-occupiers, an important issue is the precise definition of their income and housing expense. This is the subject of this appendix. For housing expense and then for income, a definition which would be appropriate in a world of perfect capital markets is first put forward. This is then successively modified to give a definition that is more appropriate in a world of imperfect markets and political and administrative constraints.

Housing expense

For an owner-occupier the true economic cost of housing, the user cost of housing,¹ may be specified as

$$V[e r_m (1-t) + r_m (1-e) + t_p + m - \dot{p}/p], \quad (E1)$$

where V is the value of housing capital, e the ratio of equity to value, r_m the mortgage interest rate, t the personal income tax rate, t_p the property tax rate, m the operating cost rate (including the cost of utilities and maintenance), and $\dot{p}/p$ the rate of capital gain of the housing capital.

Some components of the expressions for the economic cost of housing here are virtually self-explanatory: the property tax rate, t_p , when multiplied by V is property taxes, and m , when multiplied by V , is the cost of utilities, maintenance, and other operating items. Mortgage interest costs are given by the mortgage interest rate, r_m , times the loan amount, $(1-e)V$. Notice that these expenses are all paid out of after-tax income. More generally, user cost, like rent and expenditure on other consumer goods and services, is paid out of after-tax income.

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A less obvious component of the user cost of housing is the opportunity cost of the owner's equity, that is, the return the home equity would generate if held in the form of another asset. The owner sacrifices this return by holding equity in the home, and so this is a component of the cost of housing. It is assumed here that the best alternative asset would yield a return equal to the mortgage interest rate¹ and that this return would be taxable, so that the return net of tax would be $r_m(1-t)$. Thus the opportunity cost of equity, after tax, is $V.e.r_m(1-t)$. For a home worth \$35,000 with no mortgage, a mortgage interest rate of 16 per cent, and a personal tax rate of 20 per cent, the opportunity cost of equity is \$4,480 per year, or \$373 per month.

The final component of user cost is the critically important negative item, capital gain. The greater the capital gain, $V.(p/p)$, the lower the user cost. A capital gain of 12 per cent in the case of a house worth \$35,000, for example, reduces user cost by \$4,200. To see the relative importance of the capital gain and the opportunity cost of equity more clearly, add the assumptions that the property tax rate is 1 per cent and the operating cost rate 4 per cent. Substituting these values and those given above for capital gain and opportunity cost of equity into (E1) yields an annual user cost of \$2,030, much less than one would expect the household would have to pay to rent the same house. If, alternatively, the owner-occupier has only 10 per cent equity while other variables take the same values as previously, the annual user cost is \$3,038, or about 50 per cent more than for the owner with 100 per cent equity. This difference arises because the assumption that the return to alternative assets is subject to tax makes the opportunity cost of equity low relative to mortgage interest costs.

In principle, if capital markets were perfect, housing expense for owner-occupiers in a housing allowance plan should be defined as user cost. But it is likely to be politically unacceptable to deduct capital gain from other housing expense in order to arrive at housing expense for the purpose of a housing allowance, and there are administrative problems in determining annual accrued capital gain. Consider, therefore, an alternative to (E1) based on the observation that a large part of the capital gain in housing is the consequence of inflation. This alternative is:

$$V[e.r(1-t) + r(1-e) + t_p + m] - n.e.t.V, \quad (E2)$$

where r is the real mortgage interest rate and equals the nominal mortgage interest rate minus the rate of inflation, π .

If the nominal rate of capital gain in the value of housing capital is equal to π , (E2) is equivalent to (E1). Notice also that the last term, $\pi.e.t.V$, indicates the increasing relative advantage, as the rate of inflation increases, in holding home equity rather than a financial asset of which the full nominal return – not just its real return – is taxed: $\pi.e.t.V$ is zero if the rate of inflation is zero or if equity is zero. Thus it can be seen that for an owner with zero equity, housing expense other than property tax and operating costs is given by

$$V.r \quad (E3)$$

i.e. real mortgage interest. It is important to notice what (E3) indicates: housing expense is properly defined to include only the real part of mortgage interest expense, not the inflationary component as well. The inflationary component of interest expense, under the assumption made here about housing capital gain, is offset by the capital gain. Thus, if mortgage principle is \$35,000, the nominal mortgage interest rate 16 per cent, and the real interest rate 12 per cent, nominal interest payments are \$5,600, but (E2) would allow only \$1,400 of this to be declared as an expense for the purpose of the housing allowance, on the assumption that the remainder of the nominal mortgage interest expense is offset by capital gain.

This suggested treatment of mortgage interest, however, does not recognize cash flow problems and, in particular, the fact that the implicit additional repayment of principal that occurs because of the non-zero rate of inflation is forced repayment. Forced repayment causes a loss of utility for any household with a high time preference (Schwab, 1982), but it is especially likely to be a burden for low-income households.

A second objection to this treatment of mortgagors is that it does not recognize that private market rents are subsidized through the tax system when the rate of inflation is positive and when that rate is reflected both in nominal interest rates and in nominal capital gain in rental property. The tax system confers a benefit on all renters relative to mortgaged homeowners, and the housing allowance formula takes no account of this benefit. Perhaps this inequity should be recognized in the housing allowance's treatment of owner-occupiers.

Because the existence of a tax subsidy to renters in a time of inflation is not well-known; it is useful to explain why it exists. Essentially it is created because capital gains are taxed only at one-half income tax rates (and only when realized), while at the same time a 'loss' created by nominal mortgage interest may be fully deducted from income.³ In a time of inflation, to the extent that inflation is anticipated, a substantial part of the mortgage interest payment is in effect a repayment of debt,⁴ and so this tax treatment means that there is a debt-repayment-generated tax reduction. This reduction is 50 per cent of the inflation-premium part of the interest payment for a landlord in the 50 per cent tax bracket.⁵ Since there is no rationale for a debt repayment tax deduction, this reduction is properly termed a subsidy. To the extent that the rental market is competitive and landlords earn only the ruling rate of profit in equilibrium, this subsidy to landlords is ultimately a benefit to tenants, not to landlords.

These two objections to the housing expense formula given in (E2) suggest strongly that the allowed mortgage interest expense of a home owner should be greater than the real interest expense. Deciding on the part of nominal interest expense that should be allowed is a quite arbitrary exercise. An appealing formula is $r + \frac{1}{2}(r_m - r)$, or equivalently,

$$r + \frac{1}{2}\pi, \quad (\text{E4})$$

or, equivalently, $r_m - \frac{1}{2}\pi$. The extra expense of $\frac{1}{2}\pi$ may be more easy to accept if it is noted that if all landlords were in the 50 per cent bracket, if all inflation were fully anticipated, and if all subsidies were passed on to tenants, tenants would receive a subsidy that would reduce their rent by $\frac{1}{2}\pi$ times the mortgageable part of the value of the dwelling unit. It can be seen that this formula means that, so long as inflation is fully anticipated and thus reflected in interest rates, the higher the nominal mortgage interest rate, the lower the proportion allowed as an expense. (Thus for the case of a \$35,000 mortgage, 16 per cent nominal interest rate, and 12 per cent rate of inflation, allowed interest expense would be \$3,500, or 62.5 per cent of the nominal interest expense, while for a nominal interest rate of 10 per cent and inflation rate of 6 per cent, allowed interest would be \$2,450, or 70 per cent of nominal interest expense.) This at first may appear perverse, but it is the necessary outcome of taking some account of capital gain.⁶

How should the housing allowance plan treat the opportunity cost of the equity portion of housing expense? This can be most usefully answered by noting that the remaining user cost, after property taxes, operating costs, and allowed (as proposed above) mortgage interest expense are deducted from (E2), is:

$$\begin{aligned} & V[e.r(1-t) + r(1-e) - \pi.e.t] - V(r + 0.5\pi)(1-e) \\ &= V[e.r(1-t) - 0.5\pi + e.\pi(0.5-t)]. \end{aligned} \quad (E5)$$

Where there is no mortgage (i.e. where $e = 1$), (E5) is $V[r(1-t) - \pi.t]$ and the remaining user cost is the real return after tax that the owner's equity would yield if converted to a financial asset, *minus* $\pi.t$, the inflation-generated advantage to holding home equity rather than a financial asset. This advantage stems from the fact that nominal return, including the inflation component, to a financial asset is taxable. Unless the rate of inflation is very high, residual housing expense will be positive for low-income owner-occupiers without a mortgage. For instance, residual expense is \$280 if $r = 0.04$, $t = 0.2$, $\pi = 0.12$, and $V = \$35,000$. When the home is fully mortgaged (i.e. when the owner has no equity) (E5) is $V[-0.5\pi]$, so that the remaining user cost is negative – the outcome of the rule that half of the inflationary component of mortgage interest is countable as an expense.

It seems highly unlikely that the opportunity cost of equity – or, more generally, residual housing expense – would be politically acceptable as an item of allowed housing expense. The violation to equity of excluding it is reduced considerably, in times of inflation, by the presence of the $-\pi.t$ term, which reduces residual housing expense very considerably.

Defining the income of owner-occupiers

Ideally, the imputed return to home ownership should be included in countable income in a housing allowance plan. This return is the user cost of housing service – which in equilibrium equals the value of the housing service to the owner-occupier – minus expenses. Continuing with the assumption that the rate of capital gain equals the rate of inflation, the return is, from (E2),

$$\begin{aligned}
 & V[e.r(1-t) + r(1-e) + t_p + m - n.e.t.V] - V[r(1-e) - t_p - m] \\
 & = V[e.r(1-t) - n.e.t].
 \end{aligned}
 \tag{E6}$$

Note that the mortgage expense deducted here from user cost is real mortgage expense, not nominal, because the inflationary component of the mortgage interest rate in effect is a repayment of debt. Note also that $-n.e.t$ appears in (E6) because of the tax treatment of the inflationary component of the return to financial assets. In particular, inflation reduces the real opportunity cost of equity.

Because other income is on a pre-tax basis for housing allowance purposes, the return to owner-occupancy should also be on a pre-tax basis, and so included in income should be $V.e.r - (V.n.e.t)/(1-t)$. It can be seen that where the personal tax rate is zero this is just the real interest rate times home equity. For $r = 0.04$, $n = 0.12$, $e = 1$, and $t = 0.2$, this is only $0.01V$, or \$350 when V is \$35,000; when the inflation rate is only 6 per cent (i.e. when $n = 0.06$), however, the return to owner-occupancy is much greater – specifically, \$875 per year, or \$73 per month.

There is good reason to believe that the return to home ownership is in actuality substantially greater than this. First, it is very likely that, over time, house values increase faster than the rate of inflation, so that there is a real capital gain. Second, it is likely that in inflationary times the system is not in equilibrium, so that the value of housing service is greater than the user cost (made low in times of inflation by the tax treatment of the return to the competing asset, an asset yielding a return equal to the mortgage interest rate) and accordingly the return to owner-occupancy is greater than given by (E6).

Program adjustments if imputations cannot be used

For various reasons it is likely to be impossible to implement a housing allowance program for owner-occupiers in which the opportunity cost of holding home equity is allowed as a housing expense and the imputed return to owner-occupancy is included in income. If this is the case, should all owner-occupiers simply be excluded, or is there an alternative that would be more efficient and more fair? There are good grounds for suggesting the following as an alternative: (1) exclude

elderly owner-occupiers, and (2) include non-elderly owner-occupiers, excluding the imputed return to home equity from income and the opportunity cost of holding home equity from expense and including the part of nominal mortgage interest suggested in (E4).

The grounds for excluding elderly owner-occupiers are twofold. First, the vast majority of them have no mortgage, so that excluding their imputed return to owner-occupancy would be markedly unfair. A high proportion of those receiving the allowance when account is not taken of the imputed return would not receive it if account were taken of it. Second, and very important, as Table 10 illustrates, elderly owner-occupiers are already receiving excess benefits because of the omission of the imputed return to home equity from the income base used in the computation of the GIS benefit. Because of the high tax rate (50 per cent) in the GIS formula, the size of this excess benefit means that owner-occupiers are very heavily favoured relative to renters.

The grounds for including non-elderly owner-occupiers are that in contrast to the elderly they typically do not have 100 per cent equity in their homes and they typically are not beneficiaries of a program such as the GIS. Further, concern about the unfairness of not taking into account the imputed return to owner-occupancy could be substantially allayed if a limit, perhaps fifteen years, were placed on the number of equivalent years an owner-occupier could receive a housing allowance.

NOTES

- 1 For further discussion of the user cost of housing for home owners in the context of the Canadian tax system see Steele (1982). For the derivation of a user cost expression like (E1) but appropriate to the US tax system see Dougherty and Van Order (1982).
- 2 This is a common, though arguable assumption. On the one hand, Table 10 assumes that the home seller would purchase a GIC with the proceeds, which implies an after-tax return less than the mortgage interest rate net of tax. This is perhaps a more plausible assumption for elderly low-income owner-occupiers with a high equity-value ratio than is the assumption made in (E1). On the other hand, it is plausible that a low-income family owner-occupier with a low equity-value ratio would have personal debts, so that the opportunity cost of equity would be much greater than assumed in (E1).
- 3 Of course in most recent years investors were also able to deduct from non-rental income a loss created by the capital cost allowance, if the rental building was a new Multiple Unit Residential Building (MURB), and this has been a provision of major quantitative importance.
- 4 For expansion of this argument see Steele (1982, especially note 10). For more general analysis of the subsidy to borrowers in an inflationary environment see Bossons (1981, especially Table 5).

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- 5 Consider an example. Suppose a rate of inflation of 12 per cent and a mortgage interest rate of 16 per cent. Then debt in effect is being retired at the rate of 12 per cent per year above the amount indicated by the amortization schedule. Only 4 percentage points of the 16 per cent mortgage interest payment are real interest.
- 6 Further, if the mortgage is not the standard level-payment type, but rather one that recognizes the effect of inflation on equity build-up (see Carr and Smith, 1983), the mortgage payment could in fact be less than the interest expense allowed in the housing allowance formula.

Appendix F

Characteristics of housing markets and population at ICPOR sites

Vancouver and British Columbia

As Table F1 indicates, Vancouver can be characterized as a relatively fast-growing city (although with growth much less than it was in the 1960s) with relatively high-income occupants. The housing stock is of high quality and is relatively new: only 11 per cent of the rental housing stock (as of 1971) was built before 1921. It is a city with a relatively high recent immigrant population. It is quite like Phoenix, one of EHAP's two demand experiment sites, except in two major respects. First, it has a very tight housing market, with a vacancy rate of just 1.6 per cent at baseline and a remarkable 0.2 per cent slightly over two years later, and it has been regulated by rent control legislation since 1974. This rent control is of the guideline-increase-plus-cost-pass-through type analysed by Richard Arnott (1981) for Ontario, with a guideline increase generally greater than that in Ontario: it has been 10 per cent since June 1980. Units built after 1974 have always been exempt as have also been, since 1977, one-bedroom units renting for \$300 or more per month, two-bedroom units at \$350 or more, and larger units at \$400 or more. As a consequence, as of July 1982 it is estimated that about half of rental units in the province are exempt, with a much higher proportion of Vancouver units exempt.¹ It is thus clear that there has been a special incentive in the last few years for Vancouver tenants to remain in units providing a quite modest level of housing service, although this has not become a strong incentive until very recently: for BC areas of 100,000 people or more, the median rent for heated one-bedroom units was \$177 in 1976 and \$245 in 1980 (computed from 1976 and 1980 HIFE micro tape), far below the rent control threshold in 1976 and still well below it in 1980.

TABLE F1
Population and housing market characteristics, housing allowance provinces and major cities

	Population 1976	Annual rate of growth 1971-6 (%)	Renters 1971 (%)	Renter Families, 1971		Native Indians 1971 (%)	Mean family income 1971 (%)	Rental vacancy rate, baseline 1971 (%)	Rental dwellings		
				Income less than \$6,000 (%)	Head immigrated after 1961 (%)				Occupied less than one year (in 1974) (%)	In poor condition 1974 (%)	Built before 1921 (%)
British Columbia	2,466,608	2.46	36.7	34.7	9.6	2.4	—	n/a	n/a	n/a	11.1
Vancouver	1,166,348	1.49	41.1	n/a	n/a	0.7	10,664	1.6	30.9	6.1	11.2
Manitoba	1,021,506	0.67	34.0	38.6	5.9	4.4	—	n/a	n/a	n/a	21.9
Winnipeg	578,217	1.00	41.0	n/a	n/a	2.0	9,989	5.0	38.9	15.7	23.1
New Brunswick	677,250	1.31	30.6	45.4	1.7	0.0	—	n/a	n/a	n/a	37.8
Saint John	112,974	1.13	49.5	n/a	n/a	0.0	8,821	5.4	n/a	25.3	51.3

SOURCES:

Population: 1976 Census, I, Table 6.
 Renters: percentage of all occupied dwellings: 1971 Census, II.4, Tables 29, 30.
 Renter families data: 1971 Census family microdata tape; 'immigrant' refers to immigrants to Canada.
 Renting families: percentage of all individuals: 1971 Census, I.3, Table 5.
 Native Indians: percentage of all individuals: 1971 Census, I.3, Table 5.
 Mean family income: 1971 Census Tract Bulletins, Series B.
 Rental vacancy rate: vacancy rates in privately initiated apartment structures of six units or over: Vancouver rate is for April 1977 (baseline is July 1977); Winnipeg rate is for October 1979 (baseline is January 1980); Saint John rate is for October 1978 (baseline is October 1978); Canadian Housing Statistics, various years.
 Housing Statistics, various years.
 Rental dwellings in poor condition: for urbanized core only, of the CMA: Canadian Housing Statistics, 1976, Table 122.
 Rental dwellings built before 1921: percentage as of 1971: 1971 Census, II, Tables 29, 30.

Winnipeg and Manitoba

Winnipeg presents a great contrast to Vancouver. It is a slow-growing city in a slow-growing province with a somewhat lower typical family income and a rental housing stock in distinctly poorer condition. Its rental housing stock is much older: 23 per cent was built before 1921 compared with 11 per cent for Vancouver. It has a much lower incidence of recent immigrants than Vancouver but a more noticeable number of native Indians (see Table F1). Most important, Winnipeg's housing market was loose at baseline and still fairly loose two years later.² Further, rent control legislation enacted in 1976 had a sunset date of 30 June 1980, and indeed rent control was ended at that date, just six months after the start of SAFER. It was reintroduced, however, in January 1982³ by the New Democratic Party government that defeated the previous government in November 1981 after a campaign that had the reintroduction of rent control as an important plank. The temporary lifting of controls might have been expected to have resulted in a big rent increase bubble in the Winnipeg and other Manitoba markets,⁴ but the increase in 1981 was not very much greater than the previous year. This suggests that rent control in Manitoba in the first six months of 1980 and in 1982 had little market impact. This point is strengthened by the conclusions of Arnott that 'the evidence is inconclusive' (1981, p. 105) on the effect of rent control in Ontario even though Ontario had a guideline-increase-plus-cost-pass-through type of rent control like Manitoba's and the vacancy rate in every Ontario CMA except Windsor was less than the Winnipeg vacancy rate.⁵

Saint John and New Brunswick

New Brunswick is a much less prosperous and much more rural province than either British Columbia or Manitoba. Its major city, Saint John, accounts for a smaller proportion of total provincial population than either Winnipeg or Vancouver. A substantially greater proportion of renting families in Saint John had incomes below \$6,000 in 1971. Reflecting this and the great age of the city, more than half of its rental stock in 1971 was built before 1921; and in 1974 SHU found 25.3 per cent of its rental stock in poor condition, the second worst record of any CMA and more than 10 percentage points worse than the worst Ontario city, Sudbury (*Canadian Housing Statistics*, 1976, Table 122).

Like Winnipeg, Saint John had a loose housing market when its housing allowance was introduced and in New Brunswick, as in Manitoba, rent control was lifted quite soon after the beginning of the allowance program, on 30 June 1979.⁶ The looseness of the market in Saint John makes it implausible that rent control was a binding constraint with market-wide effects or that there was any rent increase bubble at the end of controls.

NOTES

- 1 Information is from Lois Toutant, Office of the Rentalsman, British Columbia.
- 2 In Canadian terms Winnipeg in October 1979 had a loose housing market, but it might not be so regarded in the United States. Carlson and Heinberg (1978, p. 34) describe Green Bay, one of the two supply experiment sites, as having a 'tight' housing market and yet its (more precisely Brown County's) vacancy rate at baseline was 5.1 per cent for rental units as compared with Winnipeg's 5.0 per cent. Perhaps US 'vacancies' include units that might more properly be regarded as abandoned.
- 3 In fact the new rent control act was not to be proclaimed until 1 August 1982, but it was retroactive to 1 January 1982. This and other information (see note 4) on Manitoba rent control and regulation was obtained from Ross Lawrence, Office of the Rentalsman, and John Fedorkiw, Tenancy Arbitration Bureau.
- 4 Some legislation existed, however, that constrained rent increases during this period. First, starting in 1970 the rent of a unit could be increased only once a year, except for units vacated three months or more after an increase. Second, three months' notice of a rent increase was required. Third, tenants could appeal rent increases to the Tenancy Arbitration Bureau, and this bureau had the right to roll back rent increases. The criterion used by the bureau to determine acceptable rent increases was 'fair market value,' except that increased financing cash flow costs on mortgage renewal might make a larger increase acceptable.
- 5 For an alternative point of view on the effect of Ontario rent control see Smith and Tomlinson (1981). They emphasize the decline in the real value of resale rental units during the 1970s. This decline in real value, however, did not occur for new rental units, and new rental units continued to be built, a pattern consistent with the immense subsidies (under capital cost allowance provisions and under the Assisted Rental Plan (see Smith and Tomlinson)) during the period for new rental units but not for resale units. In other words, it is plausible that not rent control but government subsidies to new units depressed the market for old units.
- 6 Rent control began October 1975. It was of the guideline-increase-plus-cost-pass-through type, with tenants able to appeal the guideline increase. Guideline increases were 6 per cent in 1976; 7 per cent if heat provided, 5 per cent if heat not provided, 1977; and 6 per cent in 1978 and 1979. Rent control has not been reintroduced. Information was obtained from Elmer Cronk, director, Assessment Branch, Department of Municipal Affairs, New Brunswick.

Appendix G
Characteristics of housing allowance
recipients over time

TABLE G1
Number and characteristics of beneficiaries of Canadian housing allowance programs, various dates

A. Number of beneficiaries

	British Columbia	New Brunswick	Manitoba	Elderly	Families
Jan 1978 (six months after baseline)	14,767	200	1,948	Jan 1980 (baseline)	Jan 1981 (baseline)
Dec 1979	13,361	953	2,225	Mar 1980	Mar 1981
Dec 1980	12,505	988	2,384	Dec 1980	May 1981
Dec 1981	11,374	999	3,081	Dec 1981	Dec 1981
Jun 1982	11,254	1,013	3,358	Jun 1982	Jun 1982

B. Demographic characteristics of beneficiaries (incidence among beneficiaries in percentages)

	British Columbia				New Brunswick				Manitoba	
	Dec 1979	Dec 1981	Feb 1980	Jul 1982	Dec 1981	Dec 1981	Dec 1981	Dec 1981	Dec 1981	Dec 1981
Age										
Elderly	19.4	16.8	25.9	17.3	22.9	20.5				
65-69	55.6	57.6	45.6	52.4	49.2	52.3				
75 and over										
Families	-	-	-	-	23.9	26.6				
25 or less	-	-	-	-	28.5	29.5				
36 and over										
Household type										
Couple	11.2	8.2	n/a	n/a	9.1	8.3				
Single	85.5	89.6	n/a	n/a	87.9	88.8				
Sharer	3.2	2.2	n/a	n/a	3.0	2.9				
Single-parent	-	-	-	-	56.4	63.2				
Five-or-more-person household	-	-	-	-	14.7	11.7				

C. Economic characteristics of beneficiaries (dollars)

	British Columbia			New Brunswick			Manitoba		
	Oct 1977	Sept 1978	Dec 1979	Dec 1981	Feb 1980	July 1982	Mar 1980	Mar 1981	Dec 1981
<i>Mean annual income</i>									
Elderly singles	4,103	4,284	4,799	5,866	4,308 ^b	5,688 ^b	4,932	5,364	6,309
(1971 \$) ^c	—	—	—	—	—	—	—	(2,347)	(2,598)
Single-parent family	(2,439)	(2,377)	(2,436)	(2,333)	(2,132)	—	(2,402)	6,947	7,249
(1971 \$) ^c	—	—	—	—	—	—	—	(3,040)	(2,986)
<i>Mean monthly rent</i>									
Elderly singles	167.06	176.58	194.67	242.94	n/a	222.27 ^b	192.78	205.11	224.18
(Deflated by rent component of CPI) ^d	(123.38)	(126.35)	(133.15)	(142.07)	—	—	(126.50)	(126.85)	(128.91)
Single-parent family	—	—	—	—	—	—	—	243.94	252.41
(Deflated by rent component of CPI) ^d	—	—	—	—	—	—	—	(150.86)	(145.15)
<i>Mean monthly housing allowance</i>									
Elderly singles	n/a	49	47.89	57.57	48.83 ^b	38.57 ^b	47.87	74.27	61.80
Single-parent family	—	—	—	—	—	—	—	86.08	81.12

^a All data for Manitoba elderly refer only to elderly 65 and over (persons 55 and over were eligible under some circumstances starting in January 1981).

^b Includes couples as well as singles.

^c Deflated by consumer price index (all items). Vancouver for British Columbia; Winnipeg used for Manitoba; Saint John used for New Brunswick.

^d Vancouver's consumer price index used for British Columbia; Winnipeg's used for Manitoba.
NOTE: Housing allowance formulas as given in chapter 3. For British Columbia R^* was \$175 for singles (\$200 for couples) August 1978; \$205 (\$255 for couples) September 1978; February 1980; \$225 (\$245) March 1980-June 1981; \$265 (\$295) July 1981-June 1982. For Manitoba elderly R^* was \$205 for singles (\$225 for couples) to December 1980; \$240 (\$270) January 1981-June 1982. For Manitoba families, R^* was \$270 for 2-person families, \$295 for 3, \$310 for 4 or more, to June 1982. For New Brunswick, R^* was \$175 for singles (\$200 for couples) to August 1980; \$180 (\$205) September 1980-June 1981; \$205 (\$230) July 1981 to date.

SOURCES: British Columbia: 1977 and 1978 data from British Columbia Ministry of Municipal Affairs (1978a); 1979-81 data from Ministry of Human Resources, 'SAFER Program Statistics', supplied by Lenke Turje; 1982 data from Mike Williams, SAFFER office, Ministry of Human Resources.

Manitoba: 1980 and 1981 data from Manitoba Housing and Renewal Corporation 'SAFER Program Statistics' and 'SAFFR Program Statistics' supplied by Jim Zamprelli; 1982 data from Morley Minuk, MHRC.

New Brunswick: 1978-81 data from 'Statistical Report, Rent Supplement' and updates supplied by Claudia Barnett, New Brunswick Housing Corporation, 1982 data from Claudia Barnett.

Appendix H

Setting threshold rents

The level at which the threshold rent is set in the benchmark plan is the 33rd percentile rent. More specifically, the threshold rent for a given household is set at the 33rd percentile rent for the appropriate size of dwelling unit for Ontario urban areas of 100,000 people or more. The basis for selecting the 33rd percentile rent is partially the presumption that rents higher than those paid by tenants living in the cheapest one-third of dwelling units in almost all cases deliver housing service that is distinctly greater than adequate. And the 33rd percentile rent is high enough to make enough units available for all recipients, because they account for much less than 33 per cent of all renting households.

Median rents are used typically in housing allowance cost estimates and in housing need studies (Clayton and Associates, 1981; Burke, Casey, and Doepner, 1981). Yet there is a substantial difference between median and 33rd percentile rents for smaller-sized units. The estimated difference for bachelor (zero-bedroom) units is 24 per cent¹ and for one-bedroom units is 12 per cent (Table H1). The quantitative importance of this is seen by noting that the difference of \$20 for one-bedroom units when inflated to 1978 by 1.06² implies a difference in ICPOR payment to households qualifying for a one-bedroom unit and paying rent at or above the threshold of \$16.85, or 34 per cent of the mean SAFER payment in British Columbia in September 1978.²

The 33rd percentile rents used here are estimated from the 1976 HIFE and are inflated to later years using average rents for Canada. They are clearly consistent with the 1974 SHU rents: for instance, for one-bedroom rents the SHU median inflated to 1976 is \$186, compared to \$185, the 1976 HIFE median. While the 33rd percentile HIFE rents are lower than those usually used in housing allowance estimates,

they are much higher than the maximum shelter allowance for couples with one child receiving family benefits in Ontario from May 1975 until September 1981: \$135 per month.³

Rent data from the HIFE survey compared with rent from other sources

In view of the use of sources other than HIFE for median rent estimates (e.g. Social Planning Council of Metropolitan Toronto, 1981) it is useful to compare HIFE rents with alternatives. The first of these is the Ontario Ministry of Housing Rental Market Survey. This survey is conducted by telephone interviews. Its geographic coverage for any 'city' is specified by the fact that its boundaries are those of telephone exchanges. As can be seen from Table H1, its Toronto rents are consistently greater than SHU-based rents, with the difference quite large in the case of three-bedroom units. This difference may be associated with a greater likelihood that the occupants of cheaper units do not have a telephone or are not at home when the interviewer calls.⁴

The second survey that is often used is the CMHC Vacancy Survey. Unlike the HIFE, SHU, and Ontario Ministry of Housing surveys, it does not use a probability sample. It produces rent data essentially as a by-product of its vacancy survey, and it does not attempt to determine rents representative of the rental unit universe. The sample, moreover, is restricted to units in buildings of six units or more. There is abundant evidence that rents in larger buildings are substantially higher than rents in smaller buildings (Staranczak, 1978; Follain, Jr, 1979).⁵ Thus it is not surprising that Vacancy Survey median rents in Toronto are higher than SHU-based medians. They are typically even higher than the Ministry of Housing median rents. Thirty-third percentile rents are much closer to medians in the Vacancy Survey than to medians in the other two sources. Assuming that the HIFE results are correct, the Vacancy Survey rents substantially overstate the universe median rent and greatly understate the variance of rents. The 33rd percentile rents from the Vacancy Survey are much higher than those from the Ministry of Housing, and the latter in turn are higher than those estimated from HIFE.

The nature of accommodation available at less than 33rd percentile rent

One objection to using the 33rd percentile rent is the possibility that most accommodation available at that rent is less than adequate.

From the very low incidence of structural problems (see chapter 2) in the universe this seems unlikely. Additional evidence is shown in Table H2. For all unit sizes the incidence of missing facilities is higher for cheaper dwellings than for all dwellings, but the difference is not great. In any case, the incidence is still so low as to be of little concern. More than 92 per cent of dwellings in any of the size categories with rents below the 33rd percentile have a complete bath and central heating. Maintenance is not quite so good, especially for extreme dwelling unit sizes: 17.8 per cent of the dwellings in the urbanized core of Ontario renting below the 33rd percentile rent and with three or more bedrooms are in poor condition, about twice the incidence for all units of this size in the urbanized core universe. Even this incidence is not of much concern, however, given that the poor maintenance indicator does not represent a very strongly inferior characteristic (see chapter 2).

The really striking difference between all dwellings and relatively cheap ones is the much greater incidence of old buildings in the latter case. For instance, of all Ontario rental dwellings with two bedrooms, 21 per cent were built before 1940; 39 per cent of the cheaper two-bedroom units were of that vintage (Table H2). People living in cheaper buildings are generally not living in inadequate accommodation; they are just living in older buildings. Another marked difference between all rental dwellings and cheapest ones is in type of structure. Cheaper units are relatively likely to be low-rise. Thus while just 6 per cent of all rental one-bedroom dwelling units are single detached, duplex, double, or row, 13 per cent of the cheapest third are; 74 per cent of all three-or-more-bedroom rental units are in this low-rise form, while 83 per cent of the cheapest third are.

If the 33rd percentile rent is to be taken as the maximum rent that a household must pay in order to be sure of obtaining adequate accommodation, a sufficient number of units in the cheapest third of all units must in fact be available for occupancy. If relatively cheap units are bargains, then their lucky and careful occupants may not part with them. If rent is low not because h is low but because P_h is below the median P_h , occupants have a great incentive to stay in order to retain the discount. In fact, evidence from SHU suggests that there is no availability problem for cheap units with two bedrooms or less but there may be for larger units. Specifically, 29 per cent of the cheapest two-bedroom units have tenants who have occupied them less than a year, only slightly less than the incidence for all units this size. For

the cheapest three-or-more-bedroom units, however, the incidence is just 18 per cent. Thus the housing allowance threshold rent for units of this size should perhaps be greater than the 33rd percentile on the grounds that the market is relatively thin.⁶

These data make it clear that the rental market for large dwelling units is distinctly different from that for small. Cheap dwelling units large enough to be suitable for a family of three or more children are far more likely to be in old low-rise buildings than are cheap smaller units. And their much smaller numbers – 45,000 in Ontario urban areas of 100,000 people or more in 1976, as estimated from HIFE, as compared to 184,000 for the cheapest third of rental dwellings of two bedrooms or less – combined with the lower probability of the average unit coming on the market at any time, mean that the search costs for large families seeking rental accommodation are likely to be great. Large low-income families needing accommodation within a week are much less likely to be able to find it than are small low-income families.

Threshold rents based on hedonic regressions

There is an apparently attractive alternative to the 33rd percentile rent, namely the estimated rent of a just-adequate unit. This rent would be estimated using coefficients from a hedonic regression. This method specifies threshold rent in terms of very specific characteristics of the housing bundle. But there are disadvantages. For instance, Follain, Jr, and Ozanne (1979) have estimated rents for US cities of a minimally acceptable unit, defined as being a walk-up; 35 years old; not having central heating; having bedrooms or bathrooms reached only by passing through a bedroom; rated of fair quality by occupant; having no large cracks or holes in the walls or ceilings; having no rats, fuse breaks, or breakdowns in basic systems; on a street rated fair by occupant and not occupied by a black household. An obvious problem with this estimator is the fact many of these characteristics are not measured in any data source available for Canada. But there is a more fundamental problem, that of unit availability. There may be relatively few units, for instance, that are 35 or more years old and have a bedroom or bathroom reached only by passing through a bedroom. This is especially likely to be the case in urban areas that have grown greatly in the last 35 years. In these areas it may be necessary to pay substantially more than the rent of a minimally adequate unit in order to obtain accommodation without an

unduly long search. Thus for relatively high-growth US cities, the ratio of the rent of Follain, Jr, and Ozanne's minimum adequate unit to the fair market rent used by the US Department of Housing and Urban Development (based on median rent for a modest unit) is very low. Specifically, while the average ratio for all cities considered is 0.70, the ratio for the high-growth city of Los Angeles is 0.58, for Phoenix, 0.56, Miami, 0.57, Kansas City, 0.48, Fort Worth, 0.47, and San Antonio, 0.45 (computed from Exhibits 1 and 2, Follain, Jr, 1979).

Other issues: location and household size

A second important aspect of the threshold rents specified here is their geographic area specification. A single set of threshold rents is specified for Ontario, not sets varying from one geographic area to another, and that set is based on rents in areas of 100,000 people and over. There is an equity and efficiency trade-off involved here. To the extent that 33rd percentile rents vary by area and threshold rents do not, the needs of households in high-rent areas are not as well met as the needs of households in low-rent areas. There is inequitable treatment of households in high-rent areas. But if threshold rents are varied, there is an inefficiency introduced because the maximum payment can be obtained only by households that choose to live in high-rent areas. Compared to the situation without housing allowances, even an ICPOR with invariant threshold rents contains an incentive to households to move from a small town to Toronto because of the large price subsidy involved in an ICPOR. If threshold rents are varied by urban area this incentive is increased.

A specific objection to the threshold rents specified here is that, because they are based on all Ontario areas of 100,000 people or more, they may be too low for Toronto. One answer to this objection is related to the discussion in the previous paragraph: the lower the threshold, the less the price-subsidy incentive for a move to Toronto. Given the fact that the Toronto rental market is usually much tighter than most in the province,⁷ reducing this incentive is probably wise. In addition, while the threshold rents are low relative to rents for the city of Toronto, they are not low relative to rents in some areas of Metropolitan Toronto. The 33rd percentile rents in 1978 for a two-bedroom apartment, computed from CMHC's Vacancy Survey, are \$309 for the city of Toronto, but \$263 for south Etobicoke, York, and Scarborough combined, and \$222 for south Etobicoke alone. Adjusting these rents by the bias factor indicated in Table H1, they are,

respectively, \$277, \$236, and \$199: there does not seem any very persuasive equity reason for giving a household an extra subsidy to allow it to live at Bloor and Bay rather than in south Etobicoke.

There is one other aspect of threshold rents to be discussed, the appropriate number of bedrooms for different sizes of households. Here a zero-bedroom unit ('bachelor') is taken as appropriate for one-person households, a one-bedroom unit for two-person households, a two-bedroom unit for three- and four-person households, and a three-or-more-bedroom unit for five or more persons. This is somewhat less generous, especially for one-person households, than the standards of the Social Planning Council of Metropolitan Toronto (1981) and the current practice in assisted-rental and senior citizen housing in Ontario. However, it is quite similar to Heinberg's (1971) standards – especially with respect to the specification of bachelor units for single households. The choice of a bachelor unit rather than a one-bedroom unit for singles makes more difference to threshold rent for this group than does taking the 33rd percentile rent rather than the median rent (Table H1). The ratio of the threshold rent for singles to that for two-or-more-person households here, using bachelor rent for singles, is much less than the ratio for threshold rents currently in use in the housing allowance programs in British Columbia, Manitoba, and New Brunswick (0.76 as against 0.90, 0.89, and 0.89, respectively).

It is not obvious what the rationale is for requiring a one-bedroom unit for a single-person household. After all, if a bachelor unit is not an adequate size for a one-person household, it is not adequate for any size of household. In 1976, 7.2 per cent of all rental units in Ontario were of this type (computed from HIFE). Perhaps, however, there is a case for setting a bachelor unit as the appropriate size for individuals under age 65 and a one-bedroom unit for those 65 and over, on the grounds that the elderly need space to store goods accumulated over a lifetime and spend more time at home because they are physically frail and typically are not in the labour force. To achieve a given level of utility, an older person may require more space in his home than a younger person because he uses less space outside his home. The actual consumption pattern of the elderly relative to younger persons is consistent with this hypothesis (Steele, 1979).

NOTES

- 1 This estimate of the difference from HIFE has a large standard error because of the relatively small number of observations. (The number of observations for other sizes of dwelling units is in every case several times as great as for bachelors.)

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- 2 This assumes that $c = 0.75$, so that $16.85 = 0.75 \times 20 \times 1.06^2$. Mean SAFER payment is from British Columbia, Ministry of Municipal Affairs and Housing, Research Staff (1978), 'Profile of the SAFER Beneficiaries,' p. 9.
- 3 Obtained from the Ministry of Community and Social Services. The BC situation is similar. Its shelter support rate for a family of three is the same as in Ontario (before September 1981). For a single person it is \$75, although the 1977 BC SAFER threshold rent for elderly one-person households was \$175. Heung (1976) uses the BC shelter support rate under its Social Assistance Act in his estimation of the transfer cost of a GAP housing allowance for British Columbia.
- 4 Non-answering numbers were allotted up to seven call-backs distributed across various times of days. The estimated non-completion rate because of respondents not answering the telephone, refusing to answer questions, etc is no more than 33 per cent for Toronto (Ontario Ministry of Housing, *Rental Market Survey*, 1978). The non-response rate for the HIFE file is 27 per cent, where a household is defined as a non-respondent not only if it is not contacted or completely refuses, but also if there is refusal to answer questions on income (except old age pensions and family allowance) or on household composition (Statistics Canada, 1978).
- 5 In the Ontario Ministry of Housing survey there is very little difference between the average rents in buildings of less than six units and in buildings of six units or more. Perhaps non-response in the survey was concentrated in the cheaper small buildings.
- 6 In fact, \$195, the threshold rent for units of three bedrooms or more used here for the benchmark ICPOR, is greater than the 33rd percentile rent.
- 7 Vacancy rates (in percentages) for buildings of six units or more for 1976 and for October 1980 (source: *Canadian Housing Statistics*, 1980, Table 18, p. 17) are as follows:

City	1976	October 1980
Toronto	1.2	0.5
Hamilton	3.0	1.3
Kitchener	2.4	1.1
London	2.5	4.1
Ottawa	2.2	3.5
St Catharines-Niagara	1.3	1.8
Thunder Bay	0.2	1.0
Sudbury	1.5	1.9
Windsor	1.8	6.1

TABLE H1

Alternative estimates of rents (dollars) in Ontario, 1974, 1976, 1978, by number of bedrooms

Area	0 bedrooms			1 bedroom			2 bedrooms			≥ 3 bedrooms		
	33rd percentile	Median	33rd percentile	33rd percentile	Median	33rd percentile	33rd percentile	Median	33rd percentile	33rd percentile	Median	33rd percentile
<i>Urbanized core of CMAs</i>												
1974	123	142	150	165	191	210	244					
<i>Areas of 100,000 people or more</i>												
1976	125	155	165	185	207	222						
1978	149	184	196	220	246	255						
<i>Toronto 1978</i>												
SHL-based	149	182	208	228	269	291						
OMH ^a	n/a	n/a	214	234	281	316						
CMHC	192	206	237	249	289	327						

^a Ontario Ministry of Housing.

SOURCE AND METHODS

Urbanized core of CMAs estimated for 1974 from CMHC, Survey of Housing Units, with subsidized units deleted. For 1976, estimates from Household Income, Facilities and Equipment (HIFE) file, with Areas of 100,000 people or more. For 1978, 1976 estimates for bachelor one- and two-bedroom units are inflated by 19 per cent and for subsidized units deleted. For 1978, 1976 estimates for three-bedroom units are inflated by 15 per cent and for survey data: 1.19 is approximately the mean ratio of 1978 rent to 1976 rent for seven Ontario cities for one- and two-bedroom units. 1.15 is approximately the mean ratio of 1978 rent to 1976 rent for three-bedroom units for Toronto and Ottawa. Toronto 1978: SHL-based estimates are 1974 SHL estimates for the Toronto urbanized core times the ratio of HIFE, 1976 rent for Ontario areas of 100,000 people or more to the SHL Ontario rent, times the ratio of Toronto 1978 to 1976 rent from the OMH's survey. The ratios are calculated separately for each percentile and bedroom category. The OMH estimate is computed from its Rental Market Survey, carried out in October 1978. The OMH rent estimates under the heading here of '≥ 3 bedrooms' are for three-bedroom units only. The CMHC estimate is computed from CMHC's vacancy survey of October 1978.

TABLE H2
Incidence of selected housing indicators (percentages) for all and for the cheapest third of rental units, Ontario areas of 100,000 people and over^a

Area	0 bedrooms		1 bedroom		2 bedrooms		≥ 3 bedrooms	
	Below 33rd percentile rent	All units	Below 33rd percentile rent	All units	Below 33rd percentile rent	All units	Below 33rd percentile rent	All units
<i>Basic facilities</i>								
No running water	[0.4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No full bath exclusive use ^b	[4.1]	1.2	2.4	1.7	2.1	1.3	0.0	0.0
No central heating ^c	[0.0]	0.0	1.4	0.8	5.6	2.2	3.7	2.5
<i>Structure</i>								
Built before 1940	[30.8]	23.0	47.1	19.9	38.6	21.1	42.9	29.3
Poor maintained ^d	22.1 ^a	8.7 ^a	9.3 ^a	5.0 ^a	12.1 ^a	6.0 ^a	17.8 ^a	9.2 ^a
Single detached	[3.0]	0.0	2.1	1.7	8.2	5.0	34.4	27.9
Row double or duplex	[0.0]	0.0	11.1	4.7	21.6	13.2	48.8	45.9
<i>Availability</i>								
Occupied < 1 year	29.6 ^a	31.3 ^a	32.1 ^a	32.4 ^a	29.1 ^a	30.9 ^a	18.4 ^a	31.2 ^a

NOTE: Brackets indicate estimate based on 21 observations

^a Estimate is for urbanized core only of CMAs, 1974

^b Exclusive use of bath or shower and of toilet

^c Principal heating equipment furnace or electricity

^d At least one major defect or at least three minor defects

SOURCE: Weighted estimates for unsubsidized household computed using Statistics Canada 1976 HIFE Micro Data File except for poor maintenance and occupied < 1 year, which are computed using the CMHC Survey of Housing Units, 1974

Appendix I

Estimates for Canada

TABLE II
The cost, distribution, and incidence of a CCR housing allowance by household type, by income, and by level of housing consumption,
Canada, 1976^a

	Number of recipients (000)	Cost (%) ^b	Mean payment and incidence ^c				
			Cost (\$000,000)	Recipients		Renters	
				$\bar{A}$ (\$)	$\bar{A}/\bar{Y}$	All households $\bar{A}$ (\$)	Renters $\bar{A}/\bar{Y}$
Household type							
Elderly ^d	155.8	39.2	54.4	26.1	0.11	47	0.020
Family							
Single-parent	71.2	40.7	37.5	18.0	0.13	126	0.028
Two-parent	54.3	8.5	27.4	13.2	0.11	10	0.003
Others	216.0	16.1	89.1	42.7	0.13	37	0.005
Income class							
$Y < \frac{1}{3}P$	104.1	97.3	81.0	38.9	0.48	442	0.461
$\frac{1}{3}P \leq Y < P$	291.7	66.9	112.3	53.9	0.11	140	0.035
$P \leq Y < 2P$	101.5	12.5	15.1	7.2	0.03	8	0.002
Housing characteristics (households with $Y < 1.5P$)							
Space ^e							
Crowded	21.8	30.7	11.0	5.3	0.13	93	0.021
Adequate	165.7	40.1	74.2	35.6	0.12	105	0.029
Good	229.0	62.8	88.7	42.6	0.12	146	0.059
Very good	78.2	74.7	34.4	16.5	0.15	74	0.092
Physical facilities ^f							
Primitive	4.9	36.4	1.7	0.8	0.13	27	0.036
Inadequate	57.0	37.9	19.2	9.2	0.12	72	0.025
Adequate	422.0	55.6	181.4	87.1	0.12	128	0.047
Good	10.7	35.1	5.9	2.8	0.14	41	0.025

^a SAFER formula uses a percentage of gap of 75 per cent, contribution rate of 30 per cent, threshold rents of \$125 for one-person households, \$165 for two-person households, \$187 for three or four persons, \$195 for five persons or more, 100 per cent participation of eligible households is assumed. Estimates use the Statistics Canada 1976 HIFE Micro Data File (1975 incomes).

^b Number of recipients as a percentage of rental households except, for the housing characteristics classifications, percentage of rental households with $Y < 1.5P$.

^c $\bar{A}$ is mean allowance, $\bar{Y}$ is mean income. For the housing characteristics classifications 'all households' and 'renters' refer only to households with $Y < 1.5P$.

^d Head or spouse ≥ 65 .

^e Y is estimated 1975 income, P is the Statistics Canada 1975 revised low-income line.

^f Crowded is defined by 'crowded bedrooms' in note 6; adequate is not crowded, but < 1 bedroom per person; good is one bedroom per person; and very good is > 1 bedroom per person.

^g Primitive dwellings have no running water or have no flush or chemical toilet. 'Inadequate' are not primitive but lack at least one of central heating, private bath, or hot running water. Dwellings with two of (two or more flush toilets, two or more baths; built in 1960 or later) are classified as good.

TABLE 12
The cost, distribution, and incidence of a variable contribution-rate housing allowance by household type, by income, and by level of housing consumption, Canada, 1976^a

	Number of recipients (000)	Cost (\$000,000)	Mean payment and incidence ^c					
			Recipients		All households			
	(%) ^b	(%)	$\bar{A}$ (\$)	$\bar{A}/\bar{Y}$	$\bar{A}$ (\$)	$\bar{A}/\bar{Y}$	Renters	$\bar{A}/\bar{Y}$
<i>Household type</i>								
Elderly	120.1	30.2	34.3	16.9	285	0.09	30	0.004
Family								
Single-parent	90.9	51.9	50.8	25.1	559	0.12	171	0.018
Two-parent	101.1	15.8	48.5	24.0	480	0.08	18	0.001
Others	164.7	12.3	68.9	34.0	418	0.14	28	0.002
<i>Income class^c</i>								
$Y < \frac{1}{2}P$	102.0	95.4	81.1	40.0	795	0.48	442	0.269
$\frac{1}{2}P \leq Y < P$	292.4	67.0	107.6	53.1	368	0.09	134	0.033
$P \leq Y < 2P$	82.4	10.1	13.8	6.8	168	0.02	7	0.001
<i>Housing characteristics of households with $Y < 1.5P$</i>								
Space/								
Crowded	35.9	50.7	18.0	8.9	503	0.09	153	0.019
Adequate	197.3	47.7	90.3	44.6	458	0.10	128	0.018
Good	180.7	49.5	68.5	33.8	379	0.11	113	0.025
Very good	62.6	59.8	25.7	12.7	410	0.14	7	0.015
<i>Physical facilities^d</i>								
Primitive	5.3	38.8	1.2	0.6	235	0.08	19	0.004
Inadequate	56.4	37.5	18.9	9.3	335	0.10	71	0.014
Adequate	396.1	52.1	172.5	85.2	436	0.11	122	0.022
Good	18.7	61.4	9.8	4.8	522	0.08	68	0.009

^a Housing allowance formula uses a percentage of gap of 75 per cent: contribution rate of 40 per cent for one-person households, 30 per cent for two-person households, 25 per cent for three-person households, 22.5 per cent for four-person households, and 20 per cent for five-or-more-person households; threshold rents and heat adjustment as in Table 26; 100 per cent participation of eligible households is assumed. Estimates use the HIFE Micro Data File, 1976, from Statistics Canada.

NOTE: Notes b to g as for Table 11.

Appendix J

Estimates for Ontario, 1980

The following tables use Statistics Canada's 1980 HIFE Micro Data File, 1979 Incomes. (This file was unavailable when the tables in the text were estimated.) Some observations on these estimates as compared with 1976 estimates are worth making. Total transfer cost of the CCR allowance rose by only 38 per cent and cost for the elderly plus families alone by 41 per cent; the cost of the VCR allowance rose by 33 per cent both in total and for the elderly plus families. Second, the number of recipients fell in all demographic categories. Third, there was a very marked decline in the number of low-income households living in crowded, physically primitive, or inadequate conditions. In general, the distribution of the allowance by income and housing consumption categories was similar in 1980 to that in 1976.

TABLE J1
The cost, distribution, and incidence of a CCR housing allowance by household type, by income, and by level of housing consumption,
Ontario, 1980^a

	Number of recipients (000)	Cost (\$000,000)	Mean payment and incidence ^c			
			Recipients		Renters	
	(%) ^b	(%)	$\bar{X}$ (\$)	$\bar{A}/\bar{Y}$	$\bar{X}$ (\$)	$\bar{A}/\bar{Y}$
<i>Household type</i>						
Elderly ^d	43.2	38.9	25.0	22.6	58	0.019
Family						
Single-parent	26.5	45.5	24.5	22.2	924	0.032
Two-parent	18.9	9.3	17.4	15.6	914	0.004
Others	69.0	14.5	43.9	39.7	636	0.005
<i>Income class^e</i>						
$Y < \frac{1}{2}P$	37.5	98.0	48.2	43.5	1,283	0.520
$\frac{1}{2}P \leq Y < P$	82.6	89.6	52.6	47.5	637	0.105
$P \leq Y < 2P$	37.4	15.2	9.9	8.9	264	0.003
<i>Housing characteristics (households with $Y < 1.5P$)</i>						
<i>Space^f</i>						
Crowded	3.9	38.5	4.1	3.7	1,050	0.023
Adequate	54.5	52.9	41.4	37.6	759	0.020
Good	79.4	79.3	52.0	47.0	654	0.044
Very good	19.2	91.1	13.2	11.9	685	0.126
<i>Physical facilities^g</i>						
Primitive	1.5	55.0	0.4	0.4	295	0.032
Inadequate	6.3	64.7	2.5	2.3	407	0.015
Adequate	139.3	67.5	99.5	89.9	714	0.031
Good	10.1	63.8	8.2	7.4	810	0.010

^a SAFER formula uses a percentage of gap of 75 per cent, contribution rate of 30 per cent, threshold rents of \$186 for one-person households, \$231 for two-person households, \$260 for three or four persons, \$280 for five persons or more; where heat was not included in rent, an allowance for heat was added of \$10.60 for zero-bedroom units, \$13.55 for one-bedroom, \$24.61 for two, \$42.10 for three, and \$53.73 for four and over; 100 per cent participation of eligible households is assumed. Estimates use the Statistics Canada 1980 HIFE Micro Data File (1979 incomes).

NOTE: Notes b to g as for Table 11.

TABLE J2
The cost, distribution, and incidence of a variable-contribution-rate housing allowance by household type, by income, and by level of housing consumption, Ontario, 1980^a

	Number of recipients (000)	Cost (%) ^b	Mean payment and incidence ^c				
			Recipients		All households		Renters
			$\bar{A}$ (\$)	$\bar{A}/Y$	$\bar{A}$ (\$)	$\bar{A}/Y$	
<i>Household type</i>							
Elderly ^d	36.3	32.7	15.8	14.7	436	0.09	37
Family							
Single-parent	29.9	51.2	30.0	27.7	1,002	0.18	276
Two-parent	32.7	16.1	26.9	24.9	822	0.10	25
Others	59.0	12.4	35.3	32.7	598	0.13	33
<i>Income class^e</i>							
$Y < 4P$	37.1	96.8	49.0	45.4	1,322	0.55	709
$4P \leq Y < P$	83.1	90.1	50.2	46.5	604	0.11	255
$P \leq Y < 2P$	37.7	15.3	8.8	8.1	233	0.02	13
<i>Housing characteristics (households with $Y < 1.5P$)</i>							
Space ^f							
Crowded	6.0	58.9	5.8	5.4	959	0.12	340
Adequate	64.8	62.9	50.4	46.7	777	0.11	248
Good	70.8	70.6	42.3	39.2	597	0.13	232
Very good	16.0	75.7	9.3	8.8	595	0.15	63
Physical facilities ^g							
Primitive	0.5	19.2	0.1	0.1	208	0.12	11
Inadequate	5.0	51.4	2.2	2.1	448	0.10	79
Adequate	140.1	67.9	95.8	88.8	684	0.12	224
Good	12.1	76.2	9.8	9.1	808	0.12	111

^a Housing allowance formula uses a percentage of gap of 75 per cent, contribution rate of 40 per cent for one-person households, 30 per cent for two-person households, 25 per cent for three-person households, 22.5 per cent for four-person households, and 20 per cent for five-or-more-person households; threshold rents and heat adjustment as in Table J1, 100 per cent participation of eligible households is assumed. Estimates use the Statistics Canada 1980 HIPE Micro Data File (1979 incomes).

NOTE: Notes b to g as for Table 11.

TABLE J3
The annual short-run transfer cost and efficiency of a CCR and a VCR allowance using median rents as threshold rents, Ontario, 1980^a

A. Transfer Cost and Distribution

	Number of recipients		Transfer cost		
	CCR (000)	VCR (000)	CCR (\$ million)	VCR (\$ million)	VCR (%)
<i>Household type</i>					
Elderly	48.6	40.7	32.9	22.6	24.9
Family					
Single-parent	27.8	31.9	26.9	32.5	20.4
Two-parent	19.9	37.3	19.7	32.5	14.9
Others	74.8	62.1	52.6	42.8	39.8
<i>Income class^b</i>					
$Y < 4P$	37.5	37.1	52.0	52.8	39.3
$4P \leq Y < P$	82.6	83.1	62.4	60.0	47.2
$P \leq Y < 2P$	50.8	51.9	17.9	17.5	13.5
<i>Level of Housing consumption^c</i>					
<i>Households with $Y < 1.5P$</i>					
Space					
Crowded	4.6	6.6	4.8	6.7	3.6
Adequate	57.3	71.9	47.3	59.0	35.9
Good	84.3	75.1	63.8	52.8	48.5
Very good	19.2	16.5	15.7	11.7	11.9
Physical facilities					
Primitive	1.5	0.5	0.4	0.1	0.3
Inadequate	6.3	5.0	2.7	2.3	2.0
Adequate	147.4	151.0	118.3	115.5	89.8
Good	10.1	13.6	10.3	12.3	7.8
					9.4

TABLE J3 (continued)

B. Target efficiency^d

		Level of housing consumption				
		Income	Space	Physical facilities		
CCR	150	(20.7)	2.71	(1.19)	0.39	(0.33)
VCR	155	(21.8)	5.06	(1.71)	0.08	(0.26)

^a Threshold rents are \$210 for one-person households, \$257 for two, \$281 for three of four, \$325 for five or more. Percentage of gap is 75 per cent. CCR plan has 30 per cent contribution rate; VCR has 40 per cent for one-person households, 30 per cent for two, 25 per cent for three, 22.5 per cent for four; 20 per cent for five or more.

^b *Y* is 1979 income, *P* is Statistics Canada 1979 revised low-income line.

^c For definition of housing characteristics see Table 26, notes *f, g*.

^d Target efficiencies are as defined in Table 27.

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Ontario Economic Council Research Studies

33 Canadian Housing Allowances: An Economic Analysis

MARION STEELE

Marion Steele presents the case for a housing-allowance program in Ontario. Much of her study focuses on the possible effects of such a program on other housing programs, market rents, the distribution of income, incentives for tenants to move to more expensive housing, and on landlords' ability to profit through higher rents. These effects are considered from the perspective of theoretical analysis and also through an extensive review of experiences in other jurisdictions that have actually implemented such programs. Special attention is given to the housing-allowance programs in British Columbia, Manitoba, and New Brunswick.

Dr. Steele unequivocally advocates that Ontario should adopt a housing-allowance program. She indicates that rents would not rise noticeably, and that the beneficiaries would be low-income tenants rather than landlords. The author also recommends that families as well as the elderly be made eligible for the program, and that the allowances be extended to both owner-occupiers and renters. She believes that Ontario's Property Tax Credit and Property Tax Grant could then be abolished.

Dr. Steele provides detailed recommendations on how to vary housing allowances with the size of family and how allowances can be made a part of existing housing programs. She also expresses concern that many who qualify for housing allowances will fail to apply for them, and she emphasizes the need for appropriate publicity to inform the poor and less educated if the new program is introduced.

MARION STEELE is a professor of economics at the University of Guelph.